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BONE AND JOINT CHANGES IN CONGENITAL SYPHILIS

WITH REPORT OF CASES *

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The more usual clinical signs of congenital syphilis, such as the characteristic rash, snuffles, rhagades, eye changes, hutchinsonian teeth and visceral changes, present a picture of rather common incidence in outpatient departments and hospital wards. The pathology of the bones, however, with the concomitant clinical symptoms and signs occurring in this disease, seems to be less emphasized if of not less common occurrence, and is for this reason of sufficient interest to warrant discussion, especially in view of the many possibilities of errors in diagnosis. The aphorism that syphilis simulates all other diseases is particularly true of the skeletal pathology of this widespread disease.

The bone lesions present themselves in a variety of forms, and are of comparatively common occurrence. Probably the most frequent of these are epiphysitis; osteitis; painless hydrops articuli; periostitis, including dactylitis, and changes in the skull, such as craniotabes, thickening of the parietal and frontal bones, and a localized thickening of the bones with softening, known as caries sicca. Stoll [1] described a new condition which he calls "knock-knee-elbows" due to an overgrowth of the internal condyle of the humerus which throws the forearm to the outer or radial side. Kirmisson [2] calls attention to pathologic fragility, and cites a case of a spontaneous fracture in a syphilitic child, aged 1 year.

AGE INCIDENCE OF LESIONS

Regarding age incidence, Findlay [3] states that bone changes may be present at birth or may develop later. In his series of about thirty-five cases, nineteen occurred during the first five months of life. Concerning the lesions seen in later childhood, appearing in the so-called osteitis syphylitica tarda, he gives the average age of incidence as from 8 to 10 years. These later lesions may, however, occur at any age. Skillern [4] cites a case of syphilitic periostitis and osteitis of the phalanges of the middle finger in a colored man, aged 30. Clogg [5] says that the majority of cases of syphilitic epiphysitis occur during the first few months of life, the third month being the commonest period. He mentions the elbows, wrists and knees as the parts most frequently involved. In the patients whose histories we report, the ages ranged from 6 weeks to 9 years.

PHASES OF PATHOLOGY

The pathology of these conditions presents some interesting phases. The first changes are characterized by periosteal thickening and the formation of granulation tissue. This granulation tissue causes an absorption of the already formed bone; and, after replacing it, later undergoes calcification. In this early stage of granulation tissue the roentgen ray may fail to detect any lesion because the pathologic calcified areas have not developed. Findlay describes a distinct epiphyseal variety of bone lesion (Wegner's osteochondritis), characterized by a broadening of the epiphyseal line with later fatty degeneration and necrosis, which gives rise to a yellowish epiphyseal zone with spontaneous separation of diaphysis and epiphysis.

Findlay sharply differentiates the pathology of the early from the late or "tardy" lesions. Under the heading of late bone lesions he mentions two types of osteoperiostitis: (1) the sclerosing or condensing, and (2) the gummatous, with necrosis and softening. The sclerosing type of lesion is characterized by increase in the size of the bone which produces a deformity. In the case of the tibia the periosteal new formation, occurring chiefly on the anterior surface, may give rise to the so-called "saber tibia." The gummatous type is characterized by necrosis, softening and abscess formation, especially in bones exposed to trauma.

Regarding dactylitis, Nichols and Ely [6] believe that this lesion is essentially a gummatous formation. They describe two varieties: the first or superficial form, affecting the subcutaneous connective tissue, the fibrous tissue and the soft parts; the second involving the bone or periosteum. In the first variety the dorsal surfaces are more liable to this form than the palmar, and the proximal phalanges are especially affected. The skin is purplish; the parts increase in size, and are tense and hard, or soft and semifluctuating. The gummas may break down but do not tend to suppurate. In the second form there is destruction of the bone and peri-

* From the Medical Service of the Children's Hospital.

1. Stoll, H. F.: The Clinical Diagnosis of Heredosyphilis, J. A. M. A. **77**:923 (Sept. 17) 1921.
2. Kirmisson, P.: Rév. gén. de clin. et de thérap. **30**:1 (Jan. 1) 1916.
3. Findlay, Leonard: Syphilis in Childhood, Oxford Medical Publications, 1919, p. 48.
4. Skillern, P. G.: Internat. Clin., Series 23, **3**:207, 1913.
5. Clogg, H. S.: The Diagnosis of Some Chronic Joint Affections, Internat. Clin., Series 16, **3**:96, 1906.
6. Nichols, J. B., and Ely, L. W.: Diseases and Deformities of the Hands and Fingers, Reference Handbook of the Medical Sciences **4**:867-901, 1914.

osteum. Relative to the joint changes, a not uncommon condition is the painless effusion of the knee joints which is at times associated with an osteoperiostitis of the lower end of the femur. Findlay and Riddell[7] have described a case which they designated "gummatous synovitis simulating rheumatoid arthritis" in which nearly all the joints of both limbs were affected.

The characteristic skull changes of congenital syphilis correspond to the general bone pathology. A thickening of the parietal and frontal bones in the region of the anterior fontanel, giving a square appearance to the head, has been termed the "hot cross bun head." We have observed this in only a few instances. Many writers regard this conformation, when typical, as pathognomonic of syphilis.

ACUTE EPIPHYSITIS

The symptoms and signs are in the main characteristic, especially in the infant, while in the older child variations are often encountered. In acute epiphysitis the onset is usually quite sudden with some constitutional reaction in the form of vomiting and gastrointestinal disturbances, followed by some degree of paralysis. The mother may state that the child was in apparently good health when suddenly it became ill with fever, vomiting and diarrhea. Following this there is usually a history of the child's crying continually when handled and especially on any movement of the extremities that happen to be involved; shortly after, an apparent paralysis is noticed by the mother. There may be some swelling and tenderness around the joints involved. However, in some instances there are no external signs, and even roentgen-ray examination may fail to reveal any definite pathologic condition. The Wassermann reaction will usually be found positive; but with the clinical picture just described, in an infant under 6 months of age, a negative reaction should not too greatly influence one in ruling out a syphilitic condition.

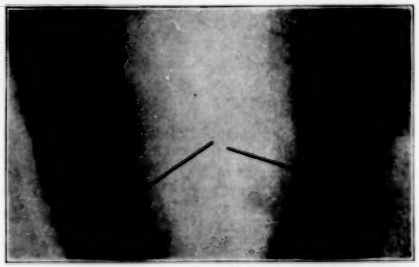

Fig. 1 (Case 2).—Osteoperiostitis of tibiae; Wassermann reaction negative.

Case 1 is typical:

CASE 1.—V. D., a colored girl, aged 6 weeks, admitted, July 31, 1921, with Parrot's pseudoparalysis of both arms, was said by the mother never to have had any skin lesions, and had seemed in perfect health since birth. Since July 24 the child had no motion of the arms, and cried whenever they were handled by the mother. Physical examination revealed no signs of specific disease. The child was placed on inunctions and neo-arsphenamin. Three days after admission the Wassermann report came back three plus. Improvement was noted within two weeks, and on discharge the child could move both arms to a moderate degree. A roentgenogram in this case was reported negative.

That even the very young infant may have acute rather than latent symptoms of periosteal or perichondrial inflammation should always be borne in mind. Case 2, in which there was a very acute bone lesion, is instructive in this regard:

CASE 2.—W. S., a colored boy, aged 6 weeks, admitted, June 3, 1921, suffered from colic and tenesmus, the frequent passage of loose, green stools, and pain, swelling and tenderness of the left leg. The child had lost weight and had been quite ill. The Wassermann reaction was negative, but roentgen-ray examination revealed a definite osteoperiostitis of the left tibia. Specific treatment was instituted with prompt improvement.

LATE LESIONS

The late or tardy syphilitic manifestations in the long bones of older children are distinct in their clinical manifestations from those seen in the infant. The suggestive thickening and broadening of the bony structure, especially near the joints, the vague pains and sometimes lack of symptoms pointing to a constitutional disease usually cause these patients to appear in the orthopedic division of the outpatient department.

The subjoined histories are quite characteristic:

CASE 3.—*Acute osteoperiostitis.* H. L., a colored girl, aged 10 years, came under observation, May 19, 1921, with a swelling of the right leg. The mother stated that in the preceding November the child had sustained a fall, and that since that time the leg had been sensitive to touch and had been steadily growing larger. The Wassermann reaction was three plus. Roentgen-ray examination revealed a thickened cortex of the right tibia and to a lesser extent of the left. Routine antisyphilitic treatment was instituted, with marked improvement of the condition.

CASE 4.—R. R., a white boy, aged 7 years, came under observation, Jan. 15, 1921, complaining of pain in both knees. The mother stated that in December the joints had been swollen, tender and painful, and she thought that the swelling was increasing. The uncle stated that the father had syphilis. The child was anemic and poorly nourished, there was general glandular involvement, and both knees were tender and swollen. The Wassermann reaction was three plus. Roentgen-ray examination disclosed osteoperiostitis of the tibiae with extensive involvement in the region of the condyles. Treatment was instituted and the child was discharged, March 3, improved. April 30, he was returned to the dispensary with involvement of the left arm. He was placed on a second course of treatment. The Wassermann reaction at this time was one plus.

DACTYLITIS

Dactylitis manifests itself as a gradual swelling with discoloration and tenderness of the phalanges involved, usually painless. Especially at first the lesions are frequently multiple, symmetrical, and there may be other signs of a syphilitic process in the nature of characteristic skin eruptions, condylomas and snuffles, with a strongly positive Wassermann reaction. A not uncommonly associated osteoperiostitis involving the tibiae presents a characteristic bowing with many palpable nodules. The child fails to thrive, and there is usually some elevation in temperature, with a history of frequent intestinal upsets, as in Case 5:

CASE 5.—G. P., a colored girl, aged 8 months, came under observation with a dactylitis involving the fingers of both hands and the little toe of the left foot. The mother stated that at 2 months of age the child had a diffuse skin eruption

7. Findlay and Riddell: Glasgow M. J., January, 1906, p. 13.

which later disappeared. Gastro-intestinal disturbances also occurred. Three weeks prior to admission there was a swelling of the right index finger and the ring finger of the left hand, and to a lesser extent of the left little toe, with redness and some tenderness. Physical examination revealed ulcerating condylomas around the vulva and anus, with several small, hard nodules over the right tibia. The Wassermann reaction was three plus. Roentgen-ray examination disclosed extensive bone changes in the fingers mentioned, the tibia and both elbows. The child was placed on routine antisyphilitic treatment, with slight improvement, and was referred for further treatment following the mother's request to take the child out of the hospital.

CASE 6.—*Syphilitic dactylitis.* G. G., a colored boy, aged 2 months, came under observation, Aug. 18, 1921, with swollen fingers of the left hand and swelling of several toes of the left foot. The proximal phalanx of the left index finger was enlarged, discolored and tender; also the fourth toe of the left foot and to a lesser extent the fifth. The child snuffled; the spleen was palpable three finger breadths beneath the costal margin; the epitrochlears were enlarged; there was a desquamation of the soles of the feet, and there were several flat sores around the anus and scrotum. The Wassermann reaction was three plus. The stools were undigested. Treatment was promptly instituted. The child is still under observation and treatment.

The supposed comparative rarity of syphilitic dactylitis is not borne out by our observation of bone lesions as appearing in negro children. Out of seven skeletal lesions due to syphilis among negro children treated in the wards of the Children's Hospital in the last six months, two were dactylitis. Findlay states that he has come across this condition only twice. It is undoubtedly of more frequent occurrence in the American negro than in white children.

Fig. 2 (Case 3).—Osteoperiostitis: cortex of right tibia (anterior and middle portion) greatly thickened; Wassermann reactions, three plus.

JOINT CONDITIONS

In cases involving the joints, either in the form of an effusion or an osteochondritis or both, the onset may be gradual. This is especially noted in the older children. There may be a negative history regarding early syphilitic manifestations, and the child is, to all appearances, in good health. The first complaint is of pain in a joint, commonly the knee, usually worse at night. This is a significant point in the matter of diagnosis. The mother almost invariably pays little attention to it, considering the condition as one of "growing pain." Later the joint begins to swell and is usually associated with some degree of tenderness. Other joints then become involved, and within a short time the character of the pathologic process may be brought to light by the development of other signs of syphilis. Roentgenograms may reveal a thickening of the periosteum at the condyles, or, not infrequently, show no changes at all. Fever may or may not accompany the condition.

One of our patients, presenting the symptoms and signs and the history described, developed interstitial keratitis two weeks following admission to the hospital:

CASE 7.—F. P., a colored girl, aged 9 years, came under observation, Sept. 16, 1921, with complaint of pain and swelling of both knee joints. About two weeks before, the child complained of pain in the right knee, worse at night, following which the joint began to swell. Shortly after, the mother stated that the left knee began to pain, followed by swelling. Both joints were tender at the time. Examination revealed both knees markedly swollen and tender, with a suggestion of fluid on palpation. The temperature was normal. The Wassermann reaction was three plus. Within a few days the tenderness and pain subsided. The child was placed on inunctions and neo-arsphenamin. Two weeks later the left eye revealed a well-marked interstitial keratitis. The child is still under observation.

In contrast to this is the case involving a joint, in which the onset is acute. This is likely to be seen in the infant, and is often associated with a rapid destruction of bone tissue with necrosis, softening and abscess formation. There may be little or no constitutional reaction, and the Wassermann reaction may be negative. Roentgen-ray examination, however, usually reveals the true nature of the lesion. Occasionally a septic joint presents a similar picture, and it is of vast importance to be able to differentiate. We shall discuss this more fully under the heading of differential diagnosis. The skull changes are fairly typical, and are commonly associated with other stigmas of syphilis.

Case 8 is an instance of the acute type in the infant:

CASE 8.—T. J., a colored girl, aged 4 weeks, was admitted, Sept. 23, 1921, with a swelling of the right knee, and slight fever. The child took its formula well and there was no diarrhea. Examination revealed a marked swelling of the right knee joint, with redness, tenderness and fluctuation. There were a few papules on the face, but the child had no definite stigmas of syphilis. Roentgen-ray examination revealed a destructive process involving the distal extremity of the right femur. Within a few days the right arm became involved, manifested by swelling and tenderness at the wrist. A roentgenogram disclosed extensive destruction of the entire right radius. The Wassermann reaction in this case was negative, but the bone changes were strongly suggestive of a syphilitic process, so the child was placed on antisyphilitic therapy, and is at the present writing much improved and still under observation.

THE DIAGNOSIS OF BONE LESIONS

The diagnosis, under ordinary conditions, should offer no difficulties. The history, if carefully obtained from the mother, will usually reveal some previous manifestations of the disease. A history of some syphilitic lesion in the mother or father, with positive blood findings, together with a knowledge of the behavior of the child's health since birth, will help to substantiate a suspicion of a syphilitic condition. An acute onset with a localized swelling, tenderness and pain over a joint or bone in an infant should suggest, among other possibilities, an osteitis or a periostitis of

syphilitic origin. Roentgenologic examination will usually reveal characteristic changes in the bone or joint, while the presence of other signs of syphilis will give confirmatory evidence. Regarding the Wassermann reaction in these cases, it is well to say that while a positive reaction is undoubtedly of great significance, a negative by no means rules out a syphilitic process in the presence of definite clinical findings. We can best emphasize the relative value of the Wassermann test in the diagnosis of hereditary syphilis by quoting Ugon [8] in his summary following an analysis of 2,414

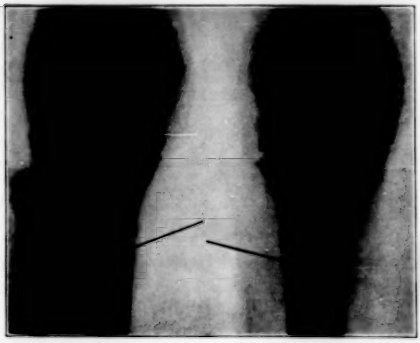

Fig. 3 (Case 4).—Osteoperiostitis; anterior cortices of tibiae thickened, and slight evidence of a destructive process along the image of the internal condyles; Wassermann reaction, one plus.

Wassermann examinations done on 2,103 infants. In 1,972 cases the clinical findings and the blood reaction were in accord, whereas in 131 cases they were contradictory. He concluded that:

> The complexity of the test, the scrupulous care with which it must be performed, and the diverse factors which modify the substances involved therein prevent us from being categorical regarding its findings. . . . The test should be considered as a diagnostic element of the first order, added to the physical findings and clinical course of the case. . . . It cannot supplant physical and clinical findings; it should complete them.

In the differential diagnosis of the various syphilitic bone lesions a number of conditions must be considered. Acute epiphysitis (Parrot's pseudoparalysis) must be differentiated from (1) Erb's paralysis, (2) scurvy and (3) acute poliomyelitis. The first condition mentioned appears very shortly after birth, the palsy is characteristic, and there is a history of a prolonged, difficult labor or of instrumental delivery. Clinical and physical findings relative to syphilis are negative. Scurvy occurs usually in later infancy, the feeding history is suggestive, tenderness and swelling are marked, there is bleeding from the gums, and the roentgen-ray examination reveals a subperiosteal hemorrhage with the characteristic "white line." Regarding poliomyelitis, in an infant under 6 months, the age itself suggests a syphilitic process. Findlay says: "It may be taken as an axiom that loss of power of a limb in an infant under 6 months of age is due to syphilitic osteitis." The history of exposure to poliomyelitis, the prevalence of the disease in epidemic form, and characteristic spinal fluid findings will obviate any difficulties in diagnosis. Acute osteitis of the tibiae with saber deformity is to be differentiated from a similar deformity due to rachitis. The former is a curve due to periosteal new formation and thickening of the bone, while the latter is a curving of the bone due to a deficiency of calcium and phosphorus. The syphilitic type is an apparent curvature, while the rachitic type is an actual one. Roentgenologic examination of the bones will confirm this differentiation. The age of onset is important. Rickets is rarely present in the bones in the first few months of life. Syphilitic epiphysitis and osteitis are seen at an early age. The ribs are rarely affected in syphilis, and commonly in rickets. Syphilitic bone enlargements have a tendency to involve the shaft by periosteal implication. Rachitic enlargement is usually limited to the epiphyses, and there is seldom pain or tenderness except in acute cases. Osteoperiostitis with necrosis and abscess formation may sometimes be mistaken for tuberculous osteomyelitis. The roentgen ray will aid greatly in differentiating. In the syphilitic varety there is a great amount of periosteal thickening, with the areas of necrosis situated in the center of the shaft. In the tuberculous type there is usually surface ulceration of the bone, with a localized thickening of the periosteum around the area of ulceration. A history of nocturnal pain may be significant of a syphilitic condition. The Wassermann test will in many cases confirm the diagnosis. A comparatively rare condition which one may occasionally be called on to differentiate from a late syphilitic osteitis is a malignant tumor of the suprarenal (neuroblastoma),[9] which has a tendency to bone metastases. The roentgen ray and the Wassermann test, together with the history, clinical picture and physical findings, will decide the nature of the disease.

A septic infection with localization in a joint often presents a similar picture to that of the syphilitic epiphysitis with abscess formation. A marked constitutional reaction in the absence of a positive blood

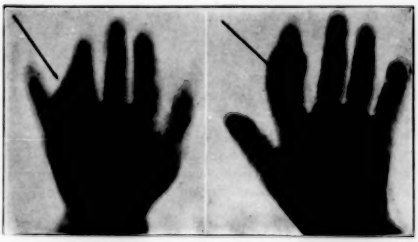

Fig. 4 (Case 5).—Syphilitic dactylitis; Wassermann reaction, three plus.

reaction and other stigmas of syphilis, together with the finding of a focus of infection, decides strongly in favor of a septic process.

Still's disease, while presenting some similarities to a syphilitic process in the form of multiple joint involvement, is associated with enlargement of the lymphatic glands, leukocytosis, secondary anemia and constitutional disturbances, and commonly occurs in later childhood.

8. Ugon, Armand: Early Hereditary Syphilis and the Wassermann Reaction, Arch. Españ. de Pediat., August, 1920, p. 485.

9. Carter, W. E.: Medullary Malignancies of the Suprarenal Gland, Report of Four Cases, Am. J. Dis. Child. 22:244 (Sept.) 1921.

The chief condition from which syphilitic dactylitis must be differentiated is tuberculous dactylitis (spina ventosa). The latter is more frequent, usually involves the first phalanx of the index finger, and is most commonly seen in early life, during the second and third years. The syphilitic type presents multiple, symmetrical lesions with other signs of syphilis.

THE TREATMENT OF SKELETAL LESIONS

The treatment should be promptly instituted, and consists of mercurial inunctions and the administra-

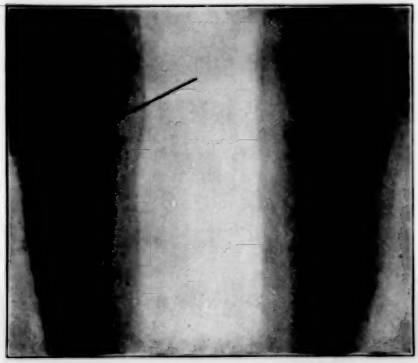

Fig. 5 (Case 5).—Osteoperiostitis: periosteal elevation along right tibia, with rarefied area in the proximal extremity; Wassermann reaction, three plus.

tion of arsphenamin or neo-arsphenamin. We have seen excellent results from weekly injections of neo-arsphenamin (intravenous), mercurial inunctions applied three times weekly during alternate weeks, and the intramuscular injections of mercuric chlorid. The neo-arsphenamin was given in the dose of 15 mg. per kilogram of body weight; the mercuric chlorid in the dose of ½ minim of a 1 per cent. solution per kilogram of body weight. In some late cases, potassium iodid, 5 grains (0.324 gm.) three times a day, is of some benefit. The length of time during which treatment is carried out depends on the individual case. The Wassermann reaction and the disappearance of symptoms and signs offer the guide. The question of treatment affords a topic for lengthy discussion, which we shall not attempt here.

The cases reported, which have all been found in the wards of the Children's Hospital, Washington, D. C., within a period of nine months, illustrate many of the points discussed with reference to pathology, symptoms, signs, diagnosis and treatment. They serve also to bear out the observations of other clinicians to the effect that in some cases of hereditary syphilis the Wassermann reaction may be absent, and rather emphasize the importance of the contributory evidence of syphilitic bone disease which may be furnished by the roentgen ray. This bears out Hochsinger's observation that in practically every infant dying of syphilis, gross bone lesons could be observed, and the roentgenogram looms larger as a possible aid to diagnosis of congenital syphilis even in cases presenting no obvious bone lesions.

CONGENITAL DISLOCATION OF THE HIP *

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In view of the astonishingly wide variation of opinion with regard to the treatment and results of congenital dislocation of the hip, and in view of the fact that control of these cases in early life is one of the most important requisites toward a favorable prognosis, discussion of this subject is desirable.

HISTORY

Congenital dislocation of the hip has been recognized since the time of Hippocrates, who described it and regarded it as curable. In 1710, Zwinger mentioned the occurrence of this deformity in three children in one family. In an interesting old monograph published in 1826, Dupuytren gives us the first comprehensive picture of the condition. Mechanical treatment was instituted in 1838 by Pravaz, who replaced the head by means of extension but was unable to retain it in the acetabulum. Nearthrosis was performed in 1879 by Roser and Hunter. Hoffa, and later Lorenz, were the first to devise technics for the treatment of the deformity by open operation, and many others have followed them. The next most important step in the treatment was the manipulative method devised by Paci in 1889, with the modifications of Paci's technic by Lorenz in 1895 and later by Schede and various other workers. In America the accomplishments in this field of surgery have been numerous.

TABLE 1.—METHODS OF PACI AND LORENZ GIVEN BY PACI

Paci's Method. Published in 1889	Lorenz'* Method Published in 1896
Anesthesia	Anesthesia
I Stage: Reduction	I Stage: Reduction
(a) Flexion	(a) Forced extension*
(b) Gradual abduction	(b) Flexion
(c) Outward rotation combined with more forcible abduction	(c) Forced abduction to a right angle
(d) Stretching	(d) Outward rotation*
	(e) Gradual stretching
II Stage: Formation of new joint	II Stage: Formation of new joint

* Lorenz, A.: The Bloodless Treatment of Congenital Dislocation of the Hip Joint, Med. Press & Circ. 70: 158, 1900.

INCIDENCE

Congenital dislocation of the hip is not an infrequent deformity, and yet it is not so common as tuberculous spine or tuberculous hip. Probably it occurs as often as, or a little less frequently than, uncomplicated congenital clubfoot. In a hasty survey of the records at St. Luke's Hospital, Chicago, for the Tuesday and Thursday orthopedic clinics, I compiled from the reference cards thirty-three cases. Eleven others, which were not mentioned among the hospital lists, were recorded at the office as having been referred to the clinics. This makes a total of forty-four cases observed in a two-day-a-week orthopedic clinic with an attendance averaging between thirty and fifty patients a week. If no allowance is made for lost reference cards, we may count these forty-four cases as having been observed during a period of eleven years. Accord-

* From the University of Illinois College of Medicine and the orthopedic department of St. Luke's Hospital.
* Owing to lack of space, this article is abbreviated in THE JOURNAL. The complete article appears in the author's reprints.

ingly, there were four cases a year, an incidence perhaps relatively low.

The deformity is much more common in girls than in boys. Its incidence in girls is usually reported as ranging from 80 to 89 per cent. Of the forty-four patients treated in the St. Luke's Hospital clinics, thirty-three were girls. Therefore, in this series the percentage was slightly lower than the average, being 75. There were no negroes, and rickets was present in only one case.

ETIOLOGY

There are many theories regarding this deformity. It has been attributed to heredity; intra-uterine pressure; injury at birth; the effect of malposition of the child in the uterus, associated with pressure; anomalies; arrested development; perverted development, and various other factors. Numerous authors disregard hereditary influence, but many others support it. Crookshank and Newberry reported bilateral dislocation of the hip in female twins 8 years and 11 months of age. In both, there was marked displacement of the head of the femur on the dorsum ilii on either side. These children belonged to a family of seven others, six of whom were older and one younger. None of the others exhibited any malformation. Crookshank states that apparently the twins were the "joint products of one ovum and therefore, unless the operation at a later date of some factor affecting both embryos identically could be assumed, it must be thought that the condition determining the deformity existed at the time of fertilization."

I recall instances in which both the mother and a child were similarly affected; in which a grandmother and a grandchild had the deformity, and in which two children in the same family were thus crippled. If heredity is not the cause, it seems at least to present itself as a factor in the final result.

Intra-uterine pressure, normal or abnormal, should not be discarded as a causative element if it is associated with a hereditary tendency and faulty development of the anatomic structures about the hip joint. Call the responsible factor arrested development, perverted growth or what you please, if the foundation or construction of the hip joint architecture varies from the normal so that its elements are weakened at any formative stage, pressure within the uterus or when the child begins to stand may result in dislocation. The three factors heredity, perverted or arrested development, and intra- uterine pressure may certainly be kept under suspicion.

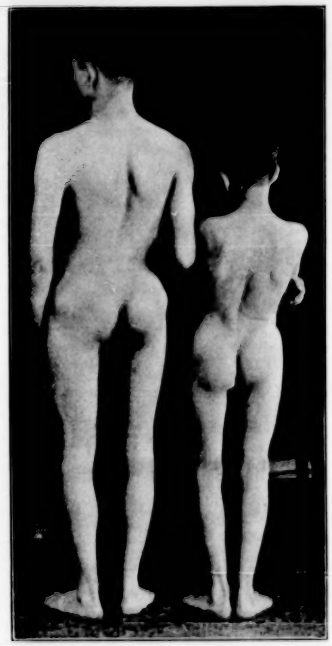

Fig. 1.—Two brothers, aged 19 and 13½, with bilateral, congenital dislocation of the hips unreduced and unreducible, complaining of pain and tiring quickly. Such cases emphasize the importance of having this type of dislocation under observation by the third year of age. Note prominence of trochanters and space between upper third of thighs. These boys have an uncle who has been lame from birth and two sisters with marked right dorsal scoliosis.

PATHOLOGY

The pathology of congenital dislocation of the hip is for the most part a deformed anatomy. The head and neck, and at times the shaft of the femur, lack size and symmetry. Normal development often appears to have failed. The femoral head may be flattened, the neck small and short, and the angle of the head and neck to the shaft may be abnormal. Coxa vara or valga, or rotation may be present. In older cases, the head and neck of the femur may be absorbed. The acetabulum is often shallow, its lips are low or absent, and its cavity is filled with soft tissue. In older patients often a deep new or secondary acetabulum is formed at the new point of function of the femoral head on the ilium. The capsule and ligamentum teres are stretched and often twisted. The muscles about the joint become short in order to adapt themselves to the shortened leg. Osteoarthritis, or at least the roentgen-ray evidence of it, appears around the joint and is a frequent development in the older patients, especially when the patient is heavy.

TREATMENT

The reduction of congenital dislocation of the hip should usually be manipulative; infrequently it should be operative.

1. *Open or Operative Reduction.*—Open operation has a very distinct place in the reduction of congenital dislocation of the hip, but should be used only in carefully selected cases. If a case is in the manipulative class, i. e., if the patient is not over 6 years of age and the leg is not more than 2 inches (5 cm.) short, manual replacement should be attempted. If this fails, the limb should be put up in plaster in a position of flexion, abduction and outward rotation for one or two weeks, after which period a second trial at closed reduction should be made. If this also fails, a second cast should be applied in order to take advantage of the additional relaxation of the tissues produced by the first cast. The second cast should be removed in two weeks. Following its removal, the skin should be prepared for four days and the hip then opened for reduction.

Among the routes of approach to the hip joint are Brackett's lateroposterior route, Smith-Petersen's supra-articular subperiosteal approach, Galloway's anterior and posterior routes, and Sherman's approach.

CLOSED REDUCTION

2. *Extension Reduction.*—I have never used mechanical extension as a method of effecting reduction and

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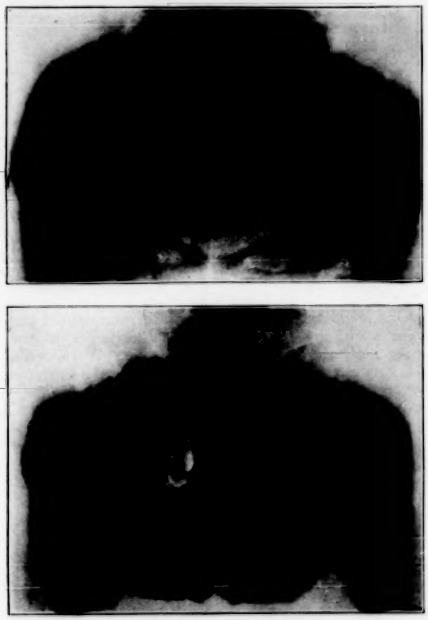
believe that, as such, it is ineffective. In certain older cases in which the prospect of manual reduction was slight, I have used mechanical extension for a few days for preliminary stretching of the parts.



Figs. 2 and 3.—Bilateral unreduced congenital dislocation of the hip neglected in early life (patients shown in Figure 1). Note deep malformed sockets and obliteration of the true acetabula.

3. *Machine Reduction.*—I have never made use of machines in attempts at reduction. In those cases in which I have seen the reduction tables used, they seemed either unsatisfactory or unnecessary.

One's most valuable aid in the management of these cases is a skill developed in the fingers by extensive and thorough digital examinations made before and at the time of manipulation for reduction. The use of the machine not only robs the operator of this most valuable aid, but endangers the patient because it attempts reduction blindly and applies dangerous force.

4. *Manual Reduction.*—The most important aid in successful manual reduction of congenital dislocation of the hip is the good fortune to have the case under control by the time the patient is 3 years of age. Its future course may then be guided, and operation performed, when indicated by the condition of the parts.

The second most important aid in the manual treatment of this deformity is the ability to interpret the condition and the relations of the structures of the hip joint by means of one's fingers. The roentgen ray should be used only to confirm and supplement the manual examination, and the plate should never be examined until the surgeon is satisfied with his manual interpretation.

The third most important aid is gentleness in the manipulation to effect the reduction. There should be no rough treatment of the hip. The best results are obtained when the muscles and other tissues are given time, during the manipulative stretchings, to accommodate themselves to the changed conditions effected by the flexion, abduction and rotation. This is true both when the hip slips into the acetabulum easily and also when manual reduction fails. In the former type of case, the muscles which are stretched only enough to allow the head to enter the socket act as elastic bands and hold it snugly in place. In those cases in which manual reduction is impossible, the carefully stretched tissues will be of more aid in the open reduction than those violently handled because, though longer, they will resume their elasticity sooner and function better. Another advantage of gentle manipulation is that it is followed by much less blood clot, and therefore open operation, if indicated, is facilitated and the chance of infection is decreased.

Formerly it was the practice of certain surgeons to attempt to deepen or manufacture an acetabulum. After the replacement was complete, the operator placed his hand on the knee and, the leg being flexed, forcibly rotated the head of the femur in the socket. Such a practice severely damages the socket and the head, neck and shaft of the femur. It also disturbs growth, which is so greatly needed by a joint which has lacked function, and it predisposes to pathologic changes such as arthritis.

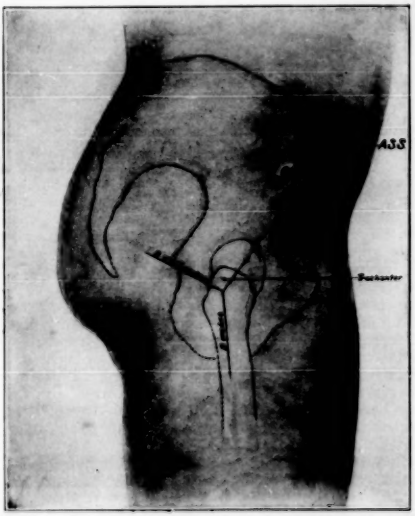


Fig. 4.—Lateroposterior route. In this illustration and Figures 5 and 6 the Brackett approach to the hip joint is shown. This diagram outlines the skin incisions and their lengths with an outline of the underlying bone. The incision at *A*, beginning at the anterior superior spine, and extending obliquely downward and outward, should terminate at the middle of the outer side of the trochanter.

Direct Reduction Without Preparatory Stretching of the Tissues: When the patient is between 3 and 4½ years of age and the shortening does not exceed 1½

inches (3.7 cm.), direct (continuous motion) reduction should be attempted. The surgeon takes a position at the orthopedic table by the side of the dislocated hip; he places the fingers of one hand over the

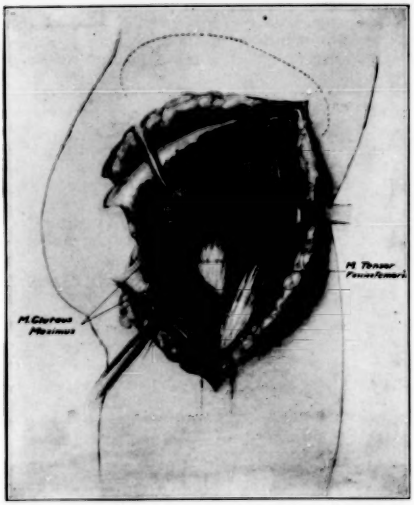


Fig. 5.—Right angle incision, cutting skin fascia and the gluteus maximus muscle; the tensor fasciae femoris muscle is shown drawn anteriorly; the trochanter, with the attachments of the gluteus medius, gluteus minimus and pyriformis, will be shown turned back in Figure 6.

trochanter, feeling the head of the femur through the gluteal muscles; he places the thumb anteriorly below the crest of the pelvis, finds the artery, and places the other hand on the knee, with the leg flexed on the thigh. While the assistant stands on the opposite side of the table and steadies the pelvis, the operator flexes the thigh firmly but slowly and cautiously until the knee approaches the chest or the extreme of flexion, as judged by the resistance. Frequently the position of the head will then be below the acetabulum as is shown in Figure 7. From this flexed position, with no pause in the movement, the thigh is brought slowly into abduction until the angle formed by the thigh and chest in the axillary line is a right angle. Replacement will often be effected as this position is reached or is slightly exaggerated while moderate rotation is made with the left hand and the femoral head and neck are lifted forward and toward the crest, with the right hand (Figs. 7, 8, 9 and 10).

Reduction Following Preliminary Stretching of the Tissues: If the muscles give considerable resistance, evident from the feel and inability to abduct the thigh fully, repeated stretching is necessary. This should be done gradually, some time being consumed for the movements and massage. Then one should repeat the firm flexion, abduction, outward rotation, and forward and upward lifting with the knee hand. If necessary, hyperabduction is added so as to bring the knee to a point back of a plane through the hips and rotate outward. If reduction fails, one should cautiously bring the thigh to full flexion with the leg straight, the foot close to the patient's face, strongly abduct, rotate outward, and try as before. If this fails, extreme flexion is again produced, and a roentgen-ray examination in this flexed position is made to determine the position of the head in relation to the socket, and the hip is put up in the flexed abducted position, rotated in or out as indicated by the sensation of firmness. A cast is applied for one or two weeks, and then reduction is attempted again. If this is again unsuccessful, treatment should be given by the open method if in the judgment of the operator the tissues will permit it, i. e., if he believes that they will not show trophic changes following the reduction because of the tenseness of the muscles.

Position of Reduced Hip for Fixation in the Cast: When the hip is successfully reduced, it should not be redisplaced. One hand should be kept over the pelvis, and the thigh should be moved with the other, the position of greatest stability thus being determined, and the hip should be fixed in plaster in this position. I call this position, whatever it may be, Ridlon's position. It may prove to be Lange's position, i. e., flexion 90 degrees, abduction 90 degrees, inward rotation. If the upper lip of the socket is flat and the head slips out easily, it should be Werndorff's position. Werndorff's position consists in axillary abduction or the extreme degree of negative abduction in which the upper thigh is fixed to the thorax. The most favorable position may be also the Lorenz position, i. e., right angle abduc-

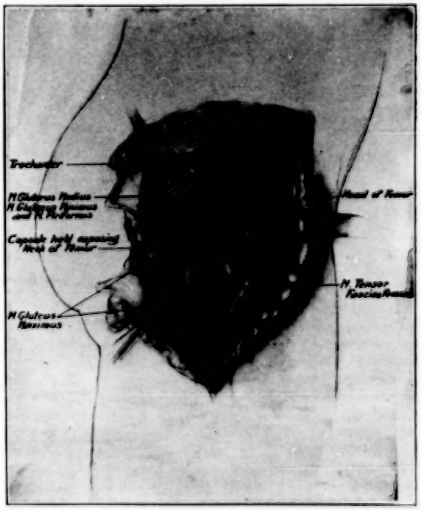


Fig. 6.—Field after outer and upper surface of trochanter has been chiseled off; to it are attached the gluteus medius, gluteus minimus and pyriformis muscles; the neck of the femur has not been damaged; the capsule is laid open and the neck and head have been exposed.

tion, the thigh being fixed in extreme abduction and slight overextension for a period of from four to five months.

The Cast: The technic of applying the cast requires mere mention. The cast should be a strong and

evenly applied single or double spica. Stockinet, sheet wadding and felt should be used to protect, especially the anterior spines and the sacrum. Two pieces of felt, each 1 inch (2.5 cm.) thick, should be placed over the sacrum. The morning after operation, one piece of it should be removed. This practice will be found greatly to relieve the pressure at a critical spot on the back.

Inclusion of the Knee in the Cast: The knee is not usually included in the cast. If it is believed that the knee structures have been strained, the leg should be included for a week and then released, the cast being cut off at the upper edge of the patella.

Length of Time the Cast Should be Worn: Fixation should be continuous, in most cases for from seven to ten months without change of position. The cast may be changed every two, three or four months as may seem necessary. In cases in which the entrance of the head into the socket, as judged both by the sound and by the sensation to the hands, indicates a good prognosis, the initial position in flexion and abduction need not be continued as long as seven months, and the leg may be brought down slightly in four or five months.

Walking in the Cast: Function should be encouraged as soon as possible, whether the dislocation is unilateral or bilateral. It is difficult to convince the parents that a child who has had both hips reduced will walk while he is in the abduction cast, but he will.

Observation After Reduction: Frequent examinations should be made during the period of fixation in the cast. One's fingers can easily feel the artery, and, by moving the knee, one can determine the position of the femoral head with reference to the artery. Inspection and encouragement of walking are essential. Of minor importance is the examination of the skin and the instruction of the nurse or parent regarding its care.

Release from the Cast: The child should be released from the cast preferably in the hospital, where it may be kept under observation and given proper massage and exercise afterward. The posterior half of the cast should be saved. At the end of a day or so the child may go home, carried in the posterior shell of the cast. If hospital release is impossible, the cast may be split in the office. The sides are cut down and the top is removed, the lower shell being saved. The patient is removed, the hip is examined, and the parents are instructed how to massage and replace the child in the cast. Following release from the cast either at the hospital or at the surgeon's office, the child should be allowed to remain out of the cast, kicking about the bed for a week or so, but should not be allowed to stand. If at examination at the end of two weeks the position of the hip is satisfactory, standing and walking may be allowed but should not be forced. The patient is then ready for discharge except for occasional observations.

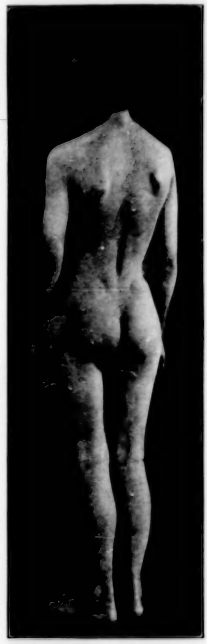


Fig. 7 (M. L.).—Girl, aged 7½, with bilateral congenital dislocation of the hip reduced when she was 3½ years old. The hips have been in for four years. The roentgenogram shows perfect reduction but a good deal of cloudiness about the heads and sockets. The symmetry is only fair. The right buttock is small and the gluteal crease on the right side is slightly low. The right head probably rides a little high. Function is excellent, though at times there is a slight limp.

COMPLICATIONS DURING TREATMENT

Probably the most frequent accident during treatment is fracture of the neck of the femur. Even as strong an advocate of manipulative treatment as Lorenz has reported eleven cases of such fracture. I have witnessed three cases, all in patients whose muscles and femur were atrophied by cast fixation following a preliminary trial at reduction. An atrophied femur will fracture easily.

The second most frequent complication occurring during reduction is paralysis. This may involve the sciatic, peroneal or crural nerves, and may be permanent or temporary. Paralysis occurred in only one of my cases. In this instance the sciatic nerve was affected but the condition was only temporary.

Other complications reported by Lorenz are rupture of the femoral artery in one case and gangrene requiring amputation at the hip in another. These accidents must be very rare.

PROGNOSIS

The prognosis of congenital dislocation of the hip is problematic. This is shown by the necessity for the appointment of a commission to investigate the subject, and the fact that in the recent report made by this commission after a year's examination of case records, patients and roentgenograms at various clinics in different cities, it asks for more time in which to gather material and to draw conclusions. It is evident, however, that much progress has been made in the management of this deformity, and that this progress is due to the same desire that prompted the appointment of the commission to study the condition, present data and make recommendations. We know that there is no standardization of methods of manipulation or operation and that often there is very little care in the selection of cases. We feel also that our percentage of good results is below what it should be.

An idea of the results obtained so far may be gained from consideration of the following reports:

Ridlon states that "good results have been obtained in from 50 to 80 per cent. of the cases."

In 1910, Brackett reported cures amounting to 76.3 per cent. following manipulative treatment at the Boston Children's Hospital during the years 1906-1908, as against cures amounting to 5 per cent. following similar treatment during the years 1896-1902. The improvement in results following open treatment was, he thinks, almost as striking, the percentage of cures for the years 1904-1906 being 73, while that for the years 1896-1902 was 32.

Soutter reported the results of an investigation of 240 cases of congenital dislocation of the hip. Of 160

of these which have been analyzed, reduction was effected in 120 and was not effected in forty. Of the forty patients with unreduced hips, twelve never returned for operation or advice, fifteen have no acetabulum,[1] and ten are unaccounted for. Of the patients with bilateral dislocation of the hip which was successfully reduced, 67 per cent. had an excellent gait,

Fig. 8 (M. L.).—Roentgenogram taken when patient was 3½ years of age. Head, necks and height indicate a good prognosis as to retention and no trouble in the reduction, although there may be capsule or other soft tissue interference. True sockets at *A*.

27 per cent. a good gait, and 6 per cent. a fair gait. Of those with bilateral dislocation which was successfully reduced, 65 per cent. have an excellent gait, 20 per cent. a good gait, and 15 per cent. a poor gait.

Turley has recently made an interesting report of the examination of a case of congenital dislocation of the hip fifteen years after Lorenz reduced the deformity by manipulation. The findings of the examination are given briefly as follows:

> General appearance robust; walks without a limp. The right gluteal region is flatter and the right thigh and leg less in circumference than the left. The spine is straight. There is no perceptible pelvic tilt. There is but a slight difference in the length of the lower limbs. Flexion, extension, adduction and abduction are not limited. Roentgen examination: Development of the right femur below the neck is the same as the left. The head of the right femur is deformed, being somewhat mushroomed, and there is a slight coxa vara.

This was only one of six cases in which operation was performed by Lorenz in one clinic in which perfect functional results were obtained. In 1904, Ridlon reported perfect functional results in only one tenth of twenty-nine patients operated on by Lorenz. Lorenz claimed that in his own country he obtained good functional results in 50 per cent. of these cases; but probably this was due to the fact that the after-treatment was carried out under his personal supervision.

Stern reported cases treated by the Lorenz closed method with these results: anatomic cures, six; perfect functional results, one; good functional result and transportation, with good function, three; redislocation, failure, one hip, and untoward results, none. Ideal results were obtained, therefore, in 63.3 per cent. of the cases.

In a paper read recently at Toronto, Galloway reported the following results in thirty-eight open operations on thirty-one patients: cures, twelve; good results, fourteen; failures, six; doubtful results, six. In the cured cases one hip was practically indistinguishable from the other.

Sherman reports that he has reduced twenty-eight hips in twenty children by arthrotomy. Of these, seventeen hips are known to be in a stable position with the head in the acetabulum. In children under 7 years of age there is ample range of motion at the hip, and no tendency to ankylosis has been observed, but in older children ankylosis must be combated. In an active child the joint may work loose. It was found that some hips reluxated because the period of fixation in the plaster cast was too short.

The prognosis in my own cases has been greatly influenced by eight factors:

1. Early recognition of the case and observation until reduction is attempted. In recent years we are getting the cases at an earlier age because of a better understanding of the situation by the nurses and the laity. Much credit in this educational work must be given to the nurses. Though very few training schools give their nurses a course in orthopedic surgery, the girls are learning its importance and are obtaining graduate instruction regarding deformities from the social service, city health, industrial and visiting nurse organizations so that they recognize the fact that when they bring a 3 year old child with congenital dislocation of the hip to the orthopedic surgeon they have done probably the most important thing in its treatment. It is discouraging, indeed, to have a girl, like M. R. (Fig. 11), appear for treatment at the age of 12 years. Both hips were very high; the femoral heads were buried in their new sockets; the thighs were large,

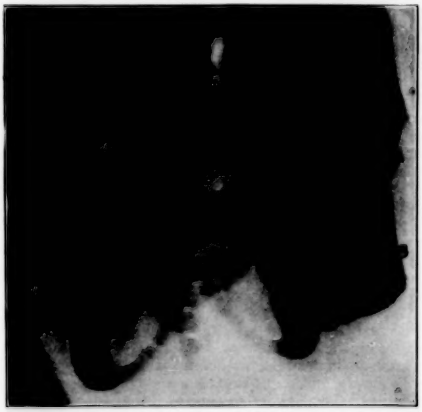


Fig. 9 (M. L.).—At left, the femoral head is seen in its natural dislocated position. At right, the femoral head is seen below the true acetabulum, and the shaft of the femur, the knee and the leg lie on the abdomen and chest. The femoral head is in process of reduction; it has moved down from *A*, the false socket, and is ready to slide into the true socket *B* through the notch when abducted and lifted upward and forward with the fingers of the "pelvis hand." This reduction was done under the roentgen-ray tube. The various positions were noted.

short, and strong-muscled. All in all, this was a case absolutely out of the question for treatment. When this patient was 3 years of age, reduction should have been easy.

1. Since the development of 9,000 roentgenograms there has been no case reported with absence of an acetabulum.

2. The anatomic condition of the parts making up the joint. When the bone and cartilage of the femoral head and the socket approach the normal and there is no twist to the femur, the result should be good. I have been impressed, however, with good results in some cases in which the anatomy predicted the contrary, and I attribute this outcome to a correct understanding of the anatomic condition and proper manipulation.

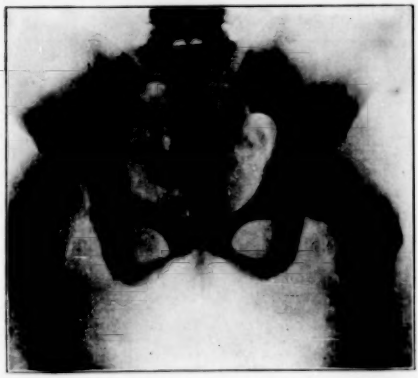


Fig. 10 (M. L.).—The pelvis four years after reduction of hips. The false sockets are barely distinguishable. There is considerable cloudiness about the heads and necks. Function practically normal.

3. The choice of operation or method of effecting reduction. In this connection the report of the commission regarding standardization will be most welcome.

4. The age of the child at the time reduction is effected. We are learning, however, that the height of the femoral head above the acetabulum and its position, above, back or anterior to the socket is the true guide to the most favorable time for reduction. Ridlon's rule is the safest to follow: "All patients under 2 years of age and with shortening of less than 1 inch, and all patients over 5 years of age with shortening of over 2 inches should be excluded." If this rule is followed, i. e., waiting in the early cases for sufficient shortening, and discarding the older patients with too much shortening or referring them for the open method, our percentage of good results will be increased. In the cases of patients over 5 years of age with shortening over 2 inches (5 cm.), instead of discarding the case immediately my habit has been to attempt reduction by the closed method, as indicated in my discussion of the treatment.

5. Dexterity on the part of the surgeon in the use of either the closed or the open method.

6. The position in which the limb is placed after reduction.

7. Treatment during fixation and walking during the time the cast is worn.

8. Treatment after the cast is removed.

TENTATIVE RESULTS IN PERSONAL CASES

When I heard the commission's report in Boston in June, I began an investigation of my own cases. Those patients treated in my clinic at St. Luke's Hospital whose present addresses could be obtained from the index card are now coming in for roentgen-ray examination and study. The cases I treated in ten years' service at the Cook County Hospital are not included. What I offer, then, is only a preliminary report.

In all, there were forty-four cases and fifty-six hips. Twenty of these cases, or twenty-six hips—the condition being bilateral in six cases—were those of patients 6 years of age or older [2] (Table 2). In this series, eighteen operations were done. Reduction was effected in five cases, in one of which the dislocation was bilateral. One hip was redislocated because of the development of trophic changes. Eleven hips (seven cases) were not treated because the prognosis was too unfavorable. One hip remained out, as attempts at manual reduction failed and the open method was not tried because the muscles were too tense. One hip is marginal. In another case the result is questionable.

TABLE 2.—RESULTS IN PATIENTS OF 6 YEARS OR OLDER

Patients 6 years of age or older	20
Dislocation bilateral	6
Total number of dislocated hips	26
Operations attempting reduction	18
5 hips (1 bilateral) reduced; one was redislocated because of trophic changes in the skin	
11 hips (7 patients) not treated; outlook too poor	
1 hip out; unsuccessful trial at reduction; open method not tried as muscles were too tense and the outlook was poor	
1 hip marginal	
1 hip questionable	
7 case records not found	

TABLE 3.—RESULTS IN YOUNGER PATIENTS

Patients under 6 years of age	24
Dislocation bilateral	6
Total number of dislocated hips	30
Operations attempting reduction	40
15 hips reduced; anatomic results fair to good; function good; parents pleased	
3 hips out; patients did not return after removal of cast; another trial at reduction should be made	
2 hips out; redislocations; waiting for more shortening before another trial at reduction is made	
2 hips marginal; one has function fair to good	
2 hips questionable	
6 case records not found	

Fig. 11 (M. R.).—Pelvis of girl, aged 14, showing high femoral heads in false acetabula. The true sockets are not obliterated. The patient complains of pain and of tiring quickly. She walks with effort and shows marked lordosis and a shortened trunk.

The results in seven cases are not yet known. Only the filing card was found. In none of these cases was the machine or reducing table used.

There were twenty-four cases of patients under 6 years of age (Table 3). In six of these the dislocation was bilateral. Therefore, these cases included thirty

2. This age limit is the age arbitrarily set by the Commission on Congenital Dislocation of the Hip of American Orthopedic Association in its report of June, 1921, and is used here to conform with its method.

hips. Forty operations were performed. Fifteen hips were reduced with a fair to good anatomic result and good function. The parents were pleased. Three hips remained unreduced and the patients did not return after release from the cast. In two cases the dislocation recurred, and at the present time I am awaiting further shortening before having another attempt at reduction. Two hips are marginal. One of these patients has a fairly good function. In two cases the result is questionable. The results in six cases are not yet known because only the index card was found. In one case of bilateral dislocation the anatomic results are perfect and function is good, but the patient limps slightly when fatigued. Possibly we should not regard as failures the five cases in which the hip is still out, the two cases in which it is marginal, and the two cases in which the results are questionable because, as the patients are still under 6 years of age, the prospect of a successful result in another attempt at reduction is at least fair.

CONCLUSION

It is urged that all those who have had experience in the treatment of congenital dislocation of the hip make a detailed report, thus aiding in establishing standards of management which cannot fail to improve our results.

30 North Michigan Avenue.

TUBERCULOSIS OF THE SPINAL CORD WITH PECULIAR CHANGES

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CASE 1.—*Tuberculous spinal meningitis with a peculiar clinical course:* In the beginning of February, 1921, a woman, aged 25, became ill with coryza, cough and fever, and then headache and pains in the back, but no vomiting. A little later, according to Dr. Hatlehol, the neck became stiff, it became more and more difficult to turn in the bed, and the legs, especially the left, became paretic; the abdominal reflexes below the umbilicus disappeared, and there was some hyperesthesia in the lower extremities. There were no symptoms pointing to the cranial nerves; the pupils were equal and reacted properly. Retention of urine developed, the urine contained blood and casts, and the patient entered the hospital under the diagnosis of nephritis. Lumbar puncture, February 24, gave 1,100 cells per cubic millimeter, mostly lymphocytes; cultures of the fluid remained sterile, and no tubercle bacilli were found. The Wassermann reaction of the blood was negative. The fever continued, the lower extremities became completely paralyzed, and irregular contractions appeared in the right arm and right half of the face. The patient died, March 3, in coma.

The clinical picture suggested poliomyelitis, but the meningitic phenomena were more marked than usual in this disease, and the course pointed rather to a tuberculous process.

At necropsy there were found caseous tuberculous lymph nodes in the hilum of one lung; a small cavity in the apex of the left lung surrounded with some small tubercles; scattered miliary tubercles in the spleen, a single caseous focus in one kidney; tuberculous meningitis at the base of the brain, and a tuberculous spinal meningitis of unusual distribution. The dura over the entire cord was adherent to the leptomeninges by fibrinous exudate, and the leptomeninges were infiltrated with a fibrinopurulent exudate throughout so that the cord and its membrane filled the canal completely. On the cut surfaces in various parts of the cord there was no evident separation between the meninges and the cord substance, which was swollen, soft and edematous, the substance flowing out over the cut surface. The distinction between gray and white matter was indefinite, the horns being barely recognizable. From the membranes, injected streaks passed into the substance of the cord. In the cauda equina there was much exudate and there were also tubercles.

Under the microscope there was found a severe inflammation in the membranes, the exudate surrounding vessels and nerves; the vessels, especially the arteries, showed in places proliferation in the wall, in places focal necrosis but no

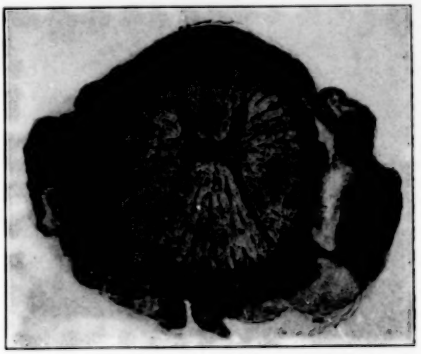


Fig. 1.—Section at level of eighth dorsal segment.

definite tubercles; all nerve roots were infiltrated with cells, and the nerve fibers, particularly in the dorsal and lumbar regions, were degenerated; at the periphery the cord was markedly edematous, notably in the dorsal part, and from the membranes extended a peculiarly distributed inflammatory process in the form of stripes along the vessels everywhere (Fig. 1). This inflammatory process was most marked in the dorsal region, which is represented in Figure 1, and in which the gray substance was involved much more than in the cervical region, the picture reminding one of acute poliomyelitis with degeneration of the ganglion cells. In the lumbar region the white substance was especially involved (Fig. 2). In the spinal ganglions was a similar inflammatory process with caseous nodes and tubercles and some degeneration of the ganglion cells. It should be noted that everywhere in the exudate in the membrane was an extraordinarily large number of tubercles.

We have here a diffuse meningomyelitis involving the whole cord. It is of special interest that the process spread from the membranes along the vessels into the cord—another example of the perivascular extension into the cord of an infectious process similar to that described in acute poliomyelitis [1] and in the case of the brain in lethargic encephalitis.[2] It seems that tuberculous spinal meninigitis rarely takes the course it did in this case. There may be doubt as to whether the symptoms depended on the changes in the cord itself or in the nerve roots and spinal ganglions; but it seems reasonable to assume that the changes in the membrane and the roots therein were the most important at the same time as the changes in the cord itself, and, with the marked edema, must have resulted in great functional disturbances. The edema may have been caused partly as the result of the inflammatory changes in the veins and resulting stasis, but it may also have

1. Harbitz and Scheel: Pathologisch-Anatomische Untersuchungen über akute Poliomyelitis, 1907.
2. Harbitz, Francis: Norsk. Mag. f. Lægevidensk. **82**: 21 (Jan.) 1921.

been produced by toxic action from the great number of tubercles in the membranes.

CASE 2.—*Solitary tubercle in the spinal cord:* A man, aged 23, who died after being in the hospital for two months (Dr. M. Krohn), had had an illness which began with weakness and a tired feeling, followed by paresis in both lower extremities, particularly the left, which increased steadily at the same time as disturbances of sensibility appeared together with fever. The roentgen ray revealed numerous closely packed shadows in the lungs as well as in the region of the hilum glands, but only shortly before death did active pulmonary symptoms develop together with pyuria.

The postmortem examination disclosed an extensive tuberculosis of the thoracic lymph nodes from which there had developed a miliary tuberculosis of the lungs, in which the tubercles were largest and most numerous in the upper lobes, with miliary tubercles also in the liver, spleen, kidneys and meninges. There were found also caseous nodules in the suprarenals, the kidneys and the prostate as well as two tuberculous ulcers in the urinary bladder. In the brain there were found, in addition to scattered tubercles in the meninges, solitary tubercles in the cerebellum, the pons and the hemispheres.

There were no macroscopic changes in the spinal meninges. In the fifth and sixth thoracic segments the cord was soft, and in the gray substance was a solitary tubercle (Fig. 3) about 2 c.c. (three-fourths inch) long and in the middle about 1 c.c. (three-eighths inch) in diameter, surrounded by soft, hemorrhagic cord substance. Microscopically this tubercle showed a caseous, degenerated structure surrounded by a tuberculous granulation tissue and a hyperemic softened border zone that separated it from the more normal cord substance, of which there was very little, in some places hardly any, the continuity of the cord being practically interrupted at the site of the tubercle. There was some round-cell infiltration with numerous tubercles in the meninges, but this process, which was acute, did not extend into the cord along the vessels as in the first case. Below the solitary tubercle the substance was edematous, especially in the eleventh and twelfth dorsal segments; there was also definite

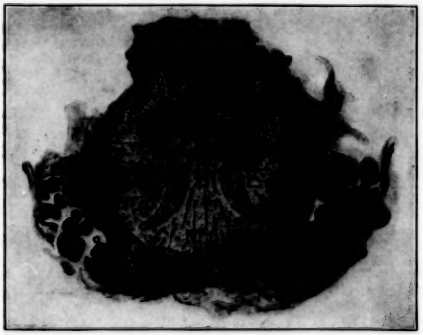


Fig. 2.—Section through lumbar region.

atrophy of the fibers in the lateral motor tracts. Above the tubercle there was degeneration in Goll's columns and in the periphery of the lateral column posteriorly, but less edema than below.

This is a typical instance of a solitary or conglomerate tubercle in the cord, with almost complete transverse separation of the cord with typical ascending and descending degenerations. Besides the tubercle there was a not very pronounced meningitis, a marked edema of the cord below the tubercle, due perhaps to a form of toxic action from the tuberculous infection which we know may cause degeneration in internal organs such as the kidney and the central nervous system.[3] The case is rather rare. Doerr,[4] in 1911, compiled seventy-four cases of solitary tubercle in the cord, and since then only a few have been added. Most of the cases occurred in children or young persons with extensive and widespread tuberculosis in other organs, and the infection of the cord develops

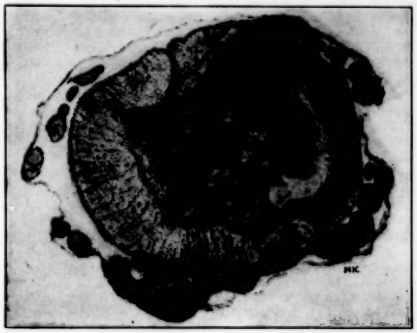


Fig. 3.—Solitary tubercle in dorsal region.

hematogenously in the same way as solitary tubercles of the brain. Any part of the cord may become involved, there being no tendency to localization in any particular part. Such tubercles grow slowly, and the symptoms are those characteristic of tumors of the cord. In one case, recovery followed operative removal of the tubercle.

CHRONIC SCLEROSING OSTEOMYELITIS

REPORT OF A CASE *

ARTHUR D. KURTZ, M.D.
PHILADELPHIA

In a recent paper, G. Fosdick Jones [1] calls attention to the apparent rarity of this disease, as described by Garrè, gives a complete bibliography, and enters into the description of the diagnosis so well that reiteration seems superfluous. All that is called for, therefore, is the reporting of cases as they may arise, and the directing of attention to certain salient points. In the case here reported, the existence of a previous suppurative bone disease, the history of long continued tonsillar infection, the many acute infections, and the amount of sclerosis warrant a full report.

REPORT OF CASE

History.—J. D., a schoolboy, aged 13, came under observation in the orthopedic clinic of the Samaritan Hospital, April 29, 1921, with a complaint of pain and enlargement of the left tibia, beginning two years before, and with a febrile attack, but no history of trauma. Pain was inconstant both as to character and to time, but seemed to be worse at night.

3. Bassoe, Peter: Combined Degeneration with Visceral Tuberculosis, Arch. Int. Med. **21**: 519 (April) 1918.
4. Doerr: Arch. f. Psychiat. **49**: 406, 1912.

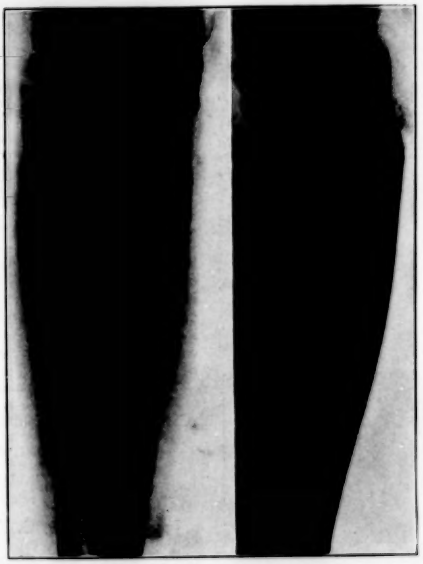
* From the Orthopedic Clinic of the Samaritan Hospital.

1. Jones, G. F.: Sclerosing Nonsuppurative Osteomyelitis as Described by Garrè, J. A. M. A. **77**: 986 (Sept. 24) 1921.

The enlargement had been progressive, and there had been a steady decline of general health. At no time had there been any discoloration or pus formation, or (so far as could be determined) any induration of the soft tissues. The patient's father and mother were living and well; he had four brothers and two sisters who appeared to be healthy. No history of tuberculosis was obtainable. The patient had had measles, pertussis, varicella, diphtheria, scarlet fever, influenza and many attacks of sore throat. Four years before he had an abscess in the right inguinal region. This was operated on, with a diagnosis of hip disease. The operative wound healed well, and since that time there had been no further trouble with the hip. No history of any traumatic conditions could be obtained.

Examination.—The boy was pale, anemic and undersized, and weighed 65 pounds (29.5 kg.). The head and eyes were negative. There was right submaxillary, supraclavicular and bilateral inguinal glandular enlargement. The epitrochlear gland was not enlarged. There was a scar about 4 inches (10 cm.) long in the right inguinal region, above and parallel to Poupart's ligament. There was no thickening or tenderness in this region. The spine and all the joints were negative. All of the extremities, except the left lower, appeared to be normal. The left leg showed a fusiform swelling from the tubercle of the tibia; to the middle of the shaft of that bone the enlargement was regular in outline, and no nodosities could be seen or palpated. Palpation disclosed no sense of thickening in the soft tissues over or about the mass. The mass was of bony consistency and was continuous with the shaft of the bone on all sides, giving the impression of uniform bony enlargement. Tenderness was absent. There was no discoloration. The knee and ankle joint moved freely. There was a slight limp, but not enough to interfere with locomotion. The pediatrician reported a mitral systolic murmur, accentuation of the second sound in the tricuspid area, and no demonstrable lesion in the lungs. The nose and throat service reported that the nose was open and free, with thick, pasty mucus on the turbinates. The tonsils were of medium size and cryptic, and probably were infected. The teeth were in fair condition except for three slightly carious ones. The urine, blood Wassermann test and von Pirquet test were negative. The blood presented the typical findings of a secondary anemia. The roentgenologist reported as follows: "Some evidence of a healed bone condition, probably an osteomyelitis of the right ilium. There is no pathologic finding in the right hip joint. This finding would probably explain the abscess of four years before. The left tibia shows a uniform, fusiform enlargement, from the middle of the shaft to the upper epiphysis, with a complete obliteration of the marrow cavity in this area, except for a small area about 1½ inches (4 cm.) below the tibial tubercle. There is no periosteal thickening. The obliteration of the marrow cavity is due to the cortex, which is enormously thickened, encroaching on it. The case is one of osteomyelitis probably of syphilitic origin."

Operation and Result.—With all these reports and our own findings in mind, we decided that there was an area of infection in the bone that had been walled off and showed in the rarefied area that appeared where the marrow cavity should be; that the infection was of extremely low grade and probably of tonsillar origin, and that the wisest course would be to trephine the bone over the rarefaction and clean out whatever material might be found, having the nose and throat surgeon perform a tonsillectomy at the same time. Accordingly, the patient was admitted to the hospital, and on May 13, under ether anesthesia, a long anterior incision was made. The periosteum was but slightly thickened; it stripped easily. Measurement was made from the tibial tubercle to a point overlying the cavity, as shown by roentgen ray. The Albee motor with a drill attached was used to open the bone. The drill worked with difficulty; owing to the extreme eburnation encountered, it was necessary to drill more than one-half inch (12.7 mm.) before the cavity was opened. The drill brought up what appeared to be normal marrow tissue. A special drill was then taken and the opening enlarged, and a curet was used to clear the cavity. Nothing was obtained except the marrow-like material; this appeared somewhat drier than normal marrow. The cavity was small, about three-fourths inch (19 mm.) long and one-half inch (12.7 mm.) deep, being entirely surrounded by the dense bone. All lips and overhanging bone were cut away by the drill. The question then arose as to the proper treatment of the cavity. With the work of G. M. Coates on the blood-clot dressing of the mastoid in mind, and believing that we were dealing with noninfected bone, it was decided to close tightly and without drainage, thereby leaving the newly formed clot in place. Two layers of 0 chromic gut were used, a running suture being employed in the deep structures and an interrupted suture in the skin. Sterile dry dressings were applied, and the patient was returned to the ward and kept in the hospital until May 30. At the time of discharge, there was a skin infection in the incision, which soon healed. A roentgenogram in August disclosed obliteration of the bone cavity. The pain was relieved at once and the boy goes about with little if any limp. The bony enlargement still persists and appears to be a permanent condition. His general health has consistently improved, the tonsillectomy, no doubt, having much to do with the improvement. About two weeks before we last saw him he developed a small, ulcerated area over the middle of the incision; this was purely superficial and has healed.



Chronic sclerosing osteomyelitis of tibia.

Before seeing Dr. Jones' paper, I thought that this was a case of low grade infection, causing osteogenesis instead of destruction, the source of the infection being tonsillar or else a legacy from one of his numerous acute infections. Since perusing his work, I have altered the diagnosis to that of Garrè's sclerosing osteomyelitis, but still believe that, etiologically, focal or preceding infection plays the greatest rôle.

SUMMARY

This is a case of sclerosing osteomyelitis, with a nontraumatic history, but with a history of many acute

infections and one site of focal infection. The marrow cavity was completely obliterated, except for a negligible area. Further, closure of the incision, without drainage, was productive of a happy result. My only regret is that I did not have the material from the cavity examined microscopically and cultures taken.

2520 North Twenty-Second Street.

A CASE OF TABETIC CHARCOT'S SPINE

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IOWA CITY

A white man, aged 54, married, was first admitted to the hospital, complaining of weakness and vomiting, in June, 1920. He had no children, and there had been no miscarriages. He had been a heavy drinker, and he admitted gonorrhea occurring twenty years before, but denied chancre. He came from a healthy family.

He had had malaria, in 1903, while living in Kansas City. For twelve years he had suffered from "shooting pains" in the legs, night sweats and shortness of breath. There had never been any swelling in the limbs. He had had heartburn and difficulty in walking. He had suffered from spells of vomiting for four years, and complained of diarrhea and hemorrhoids almost all his life. He had headaches on the right side, had been unconscious and cyanotic twice, and saw double for two weeks, two months previously. He suffered from vertigo; numbness in the outer side of the feet and hands, and polyuria, nycturia, pyuria, dysuria and incontinence of both urine and feces.

Seven years before, he began having loss of balance, accompanied by "shooting pains" in the legs, when going up stairs. Six months later, he became bloated and had severe abdominal pains at times, lasting about fifteen minutes. During these attacks he felt as if his skin were stretched too tight over the abdomen. A year later, he began to have attacks of vomiting, but he was completely relieved by morphin. He soon became unable to walk at night and could not tell where his feet were unless he watched them. There was some pain in the sacral region. His vision grew continually worse.

The patient could walk with crutches. He had a slight kyphosis in the lower part of the spine. The right eyelid drooped slightly, but the two eyes reacted equally to light and accommodation; the glands were slightly enlarged, the heart and lungs were negative; the pulse was 80; blood pressure, 130 systolic, 80 diastolic. There was no abdominal tenderness or enlargement of the spleen, and no pain over the spine. A very decided Romberg sign was noted. There was diminished pain sense and sense of position over the legs and arms, especially on the right side, and a general marked loss of reflexes, with entire absence of the knee-jerk.

The Wassermann reaction was four plus, both on the blood and the cerebrospinal fluid.

Fig. 1.—Roentgenogram showing bony deposit.

Lumbar puncture gave blood-tinged fluid, under no pressure. There were 42 lymphocytes and 7 endothelial cells. Albumin was present.

The blood count was: hemoglobin, 80 per cent.; red cells, 4,550,000; white cells, 12,000, of which 63 per cent. were polymorphonuclears and 33 per cent. lymphocytes. The red cells showed the changes of secondary anemia. The blood was negative for malarial parasites.

Cystoscopic examination revealed trabeculation of the bladder wall, with decided loss of power.

Roentgen-ray examination of the spine at this time revealed a mild osteoarthritis of the lumbar spine.

The patient was treated with arsphenamin, and on his discharge, mercury and potassium iodid were prescribed.

On his return to the hospital, in March, 1921, the following report was made:

The symptoms have remained the same except that the gastric crises have become more regular. In the last two weeks the area of anesthesia over the legs has become suddenly extended. The left eye does not react to light, and the right eye reacts only slightly.

The fourth lumbar spine has become very prominent. This was first noticed in November, 1920. There is a slight dorsal curve to the right. There is a tenderness over the lumbar muscles. There has been a slight increase in the tabetic symptoms throughout. He is able to get about on crutches with difficulty.

Roentgen-ray examination at this time revealed a very large dense, bony deposit, surrounding the second, third, fourth and fifth lumbar vertebrae and sacrum.

The patient was fitted with a back brace and, after the usual course of arsphenamin, was discharged. The Wassermann reaction on discharge was: alcoholic, two plus; cholesterinized antigen, four plus.

COMMENT

Charcot's spine is a comparatively rare condition. Charcot did not have a case in his series. Rotter,[1] in 1817, described 112 cases of Charcot's joints, none in the spine. As late as the twentieth century, it was possible to collect only fifteen cases from the literature, and only one of these occurred in America. The analysis of these cases, collected first by Jean Abadie, and summarized by Cornell,[2] in 1902, gave the following statistics:

Syphilis was present in six cases, absent in six, probable in three. Sex: eleven males; four females. Age: eleven between 50 and 60; the youngest 35; the oldest 66. Ataxia: in eight cases, extreme; in six, moderate; in one, slight. Other lesions occurred in 60 per cent.

Tabetic joints may occur at any stage in the development of the disease, although they seem to be more common in the preataxic stage. In syringomyelia, Charcot's joints develop at a late stage.

1. Rotter: J. Die Arthropathien bie Tabikern, Arch. f. klin. Chir. **38**, 1887.
2. Cornell, W. B.: A Case of Tabetic Vertebral Osteoarthropathy, with Radiograph, Bull. Johns Hopkins Hosp. **13**: 242-243, 1902.

It is rather characteric that they develop rapidly, and it is interesting to note that in the present case the roentgenograms taken only nine months previously revealed nothing of the present condition, unless one concedes a direct progression of the ostearthritic changes.

A SIMPLE APPARATUS FOR ADMINISTERING OXYGEN*

ALVAN L. BARACH, M.D.
NEW YORK

In the administration of oxygen it is desirable to employ a method that (1) offers an effective supply of oxygen; (2) causes minimal discomfort to the patient, and (3) must not involve a wasteful expenditure of oxygen. In general, past methods [1] have not been satisfactory for prolonged oxygen therapy. Probably the most commonly used method, the tube and funnel method, is the most ineffective and wasteful. Meltzer [2] has estimated that it adds less than 2 per cent. oxygen to the inspired air. The effective methods which involve the use of a face mask [3] usually cause such discomfort and objection on the part of the patients who are urgently ill as to render them undesirable for general use. In our experience the pneumonia patients, particularly, complained of the feeling of suffocation which they said the mask produced. An oxygen chamber admittedly possesses maximum effectiveness and causes no discomfort and, if the danger of combustion in the oxygen-rich atmosphere is guarded against, appears to be the ideal way to provide oxygen therapy. This method, unfortunately, is only within the reach of institutions with abundant resources, and is obviously impossible for patients treated in the home.

The apparatus here presented is simple in construction and makes use of principles by no means new. It was developed and used in the investigation referred to above, and has been recently modified so as to make it generally applicable.

As shown in Figure 1, the patient breathes room air through his nose and oxygen through his mouth. The mouth connection is the soft rubber mouthpiece used in the Benedict respiration apparatus, with the exception that the margins are cut down somewhat to minimize any pressure between the lips and teeth. The opening in the mouthpiece is large enough to allow respiration to take place through it without resistance.

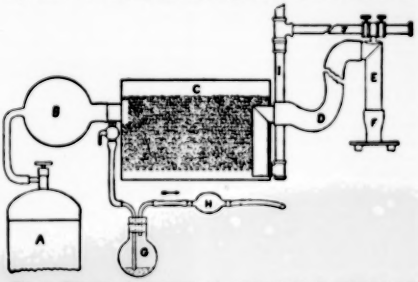

Fig. 2.—Diagram of apparatus: *A*, oxygen tank; *B*, collecting and rebreathing bag; *C*, soda-lime canister; *D*, rubber tube; *E*, metal connection; *F*, rubber mouthpiece; *G*, barium hydrate bottle; *H*, rubber bulb; *I*, *J*, *E*, adjustable metal bars.

Fig. 1.—The patient breathes oxygen through his mouth and room air through his nose. The inhaled oxygen is rebreathed, and the exhaled carbon dioxid is absorbed in the soda-lime canister. An extra mouth-piece is shown on the stand.

The margins support it between lips and teeth without leaking. The patient rebreathes oxygen through his mouth, the carbon dioxid being absorbed by soda-lime, and admits air through the nose, diluting the inhaled oxygen. The dyspneic patient usually breathes through both nose and mouth so that respiration in this manner takes place more naturally than in the normal person.

The construction of the rebreathing outfit may be seen from Figure 2. Oxygen is admitted from the tank, *A*, into the collecting or rebreathing bag, *B*, passes through the soda-lime canister, *C*, through the rubber tube, *D*, the metal connection, *E*, and the mouthpiece, *F*, into the patient. The exhaled air in the patient's mouth passes in the reverse direction. The small bottle, *G*, contains barium hydrate and is connected by tubing and stopcock to the canister to serve as a test of the soda-lime. Pressure on the bulb, *H*, draws air through the barium hydrate. The solution is left clear if the soda-lime is functioning perfectly, but a white precipitate is formed (barium carbonate) if any carbon dioxid has passed the soda-lime unabsorbed. Three removable adjustable metal bars, *I*, *J*, *E*, regulate the position of the mouthpiece. The junction of the lid with the body of the canister is not air tight, so that a strip of adhesive tape must be fastened around it. This applies to the rectangular shaped canister (Fig. 1), which was designed because of its portability. A cylindric canister needs only a rubber band around it to make it air tight. Its disadvantage is that it occupies more

* From the Medical Service of the Massachusetts General Hospital. The expense of this work was in part defrayed by a grant from the Proctor Fund of Harvard University for the study of chronic diseases.

1. Barach, A. L., and Woodwell, M. N.: Studies in Oxygen Therapy, I, In Cardiac Insufficiency and Related Conditions; II, In Pneumonia and Its Complications; III, In a Type of Shallow Breathing Occurring in Lethargic Encephalitis, Arch. Int. Med. **28**: 367, 395, 421 (Oct.) 1921.
2. Meltzer, S. J.: Therapeutic Value of Oral Rhythmic Insufflation of Oxygen, J. A. M. A. **69**: 1150 (Oct. 6) 1917.
3. Haldane, J. S.: Therapeutic Administration of Oxygen, Brit. Med. J. **1**: 181 (Feb. 10) 1917.

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room in a suitcase or handbag and is thus less easily transported.

In beginning the administration, the position of the mouthpiece is adjusted so that no pressure is brought to bear on the patient's mouth, and the margins are inserted between the lips and teeth. Oxygen is run into the rebreathing bag and the patient either naturally or by instruction begins to breathe through mouth and nose. The proportion of respiration taking place through the mouth, i. e., the inhaled oxygen, can be roughly estimated by the excursion of the rebreathing bag. One may hold the nose closed for a few seconds, forcing all respiration through the mouth, and compare the excursion of the bag at that time with the excursion when the nose is free. The percentage of oxygen inhaled when the nose is left open has a range of between 40 and 70 per cent. in individual cases. Exceptionally a patient may for a while go above or below this range, but this is usually easily remedied by instruction.

There are two precautions to be observed. One is to test the soda-lime frequently to see whether it is absorbing carbon dioxid perfectly. If a white precipitate forms after drawing the expired air through the barium hydrate, the soda-lime should be discarded and the can refilled. The length of time that the soda-lime remains effective varies; it may last fifteen hours or even longer. Pressure on the rubber bulb every fifteen minutes or so insures the early detection of impaired soda-lime. The test is so easily performed that there is no excuse for the rebreathing of carbon dioxid through imperfect soda-lime. There is a little rebreathing of carbon dioxid through the dead space of the rubber connecting tube, but this is slight, and since the nose is open, allowing free diffusion of carbon dioxid, negligible. The second precaution should be against giving pure oxygen, as pure oxygen continuously inhaled for several days is probably injurious. The nose should therefore always be left open and the patient encouraged to breathe through both mouth and nose. This precaution should be especially heeded when oxygen is to be given for several days or more.

The method has been used for one year at the Massachusetts General Hospital in the treatment of pneumonia and a variety of other conditions. In our experience the results fully justified its use. It yielded an effective concentration of oxygen to the inspired air, although the total consumption was only moderate, owing to the rebreathing. The saving of oxygen due to the rebreathing is to a certain extent offset by the expense of the soda-lime. The various parts of the apparatus, exclusive of the oxygen tank, could be collected in a handbag and readily transported. It is believed that the method is satisfactory for consistent oxygen therapy.[4]

33 East Sixty-Eighth Street.

4. The apparatus is made by Mr. Warren E. Collins, 584 Huntington Avenue, Boston.

Bubonic Plague at Lisbon.—The *Medicina Contemporanea* gives the report of Dr. A. de Faria on the small epidemic of plague at Lisbon in 1920. The sixty cases were all mild except two, and in two cases the disease was of such an abortive type that it was scarcely recognizable. The buboes were in the femoral region in 50 per cent. of the cases; in the inguinal in 15.5 per cent.; in the neck in 10.3 per cent. but in only two instances were any found in the axilla. The first symptom in nearly all the cases was a severe chill, soon accompanied by extreme malaise and fever. Only a few vomited. In a few cases the first symptom was pain in a gland, fever developing as the pain became more intense.

SHELL FRACTURE OF THE SPINE AND CHANGES IN KIDNEY AND BLADDER FUNCTION

FURTHER OBSERVATIONS

ROBERT E. CUMMING, M.D.
DETROIT

In 1919, Plaggemeyer [1] reported certain observations regarding a series of twenty cases of shell fracture of the spine, from the sections of neurosurgery and urology of Walter Reed General Hospital. Dr. Plaggemeyer's studies covered the months of February, March, April and May, 1919. Further complete surveys of remaining hospital cases were made in February, May and July, 1920, and in March, 1921. Nine additional cases have been added.

An end-result has apparently been obtained in these cases. The men are being discharged from the hospital, and will no longer be subject to study. It is a significant fact that, of the surviving patients, only one will require permanent institutional care; and that this is not necessary even in his case was proved by his driving an automobile, unassisted, more than 3,000 miles while at home on furlough, and moreover, he has become an expert wireless operator.

As parallel case types we have studied two series of cases, one consisting of five tabetics under 35, and the other of twelve patients picked at random from the wards, because of certain cystoscopic findings which seemed to relate their condition to neurologic syndromes.

We believe that the ultimately good functional results—that term being used to refer to the ability to live in good general health—in the cases of shell fracture are in part due to the fact that the injury occurred while the men were young.

The treatment has been a process of watchful waiting. We have refrained from indiscriminate catheterization, and depended entirely on the administration of accepted urinary antiseptics, at intervals, as prophylaxis against infection. However, when instrumentation has been definitely indicated, as in one case of old pyonephrosis, with persistent symptoms dating back to early infection with catheters, cystoscopy and comparative function tests were performed, and no harm resulted. The patient was afterward successfully carried through nephrectomy, which was followed by definite improvement in health and kidney function.

No development of stone or renal infection, and simply a slight persistence, in a few cases, of a low-grade cystitis, give us encouraging proof that the original idea of avoiding instrumentation was the correct one. No patient has developed a late uremia, although many have undergone repeated operations for septic bone, orthopedic or peripheral nerve conditions. There has been no evidence of hydronephrosis, or decrease in kidney function, which maintained itself in normal limits, throughout the two years and more covered by these observations. The blood chemical findings have been repeatedly within the range of normal, with no single pathologic retention.

It should be recalled that we are dealing with a condition resultant from a traumatic myelitis of more or less complete transverse extension. The sudden occur-

1. Plaggemeyer, H. W.: Shell Fractures of the Spine, with Observations on Kidney and Bladder Function, J. A. M. A. **73**:1599-1604 (Nov. 22) 1919; Observations on Certain Relations Between Shell Fracture of the Spine and Changes in Kidney and Bladder Function, J. Urol. **3**:367-406 (Oct.) 1919.

rence of the injury, and the immediate onset of the symptoms, certainly admit the possibility of complete subsidence and clinical recovery. Patients with injuries of such mild extent were not sent to this hospital, which has served as a clearing house for chronic conditions, a haven of last resort for the seriously injured soldier.

Our cases in which there was relatively complete recovery can be explained by the fact that early severe pressure was recognized, and removed by débridement or other early treatment, and not followed by infection or inflammatory destruction. Cases of actual, permanent and complete recovery should admit no possibility of nerve injury other than temporary pressure phenomena.

The series comprises injuries in extent of location, from the sixth dorsal to the cauda equina region, and we must recognize changes in bladder and kidney function as due to interruption of central nervous system control and not to disturbed segmental distribution alone. We must here call to mind the fact that sphincteric control is of reflex origin, and the loss of control resultant from a break in the reflex arc, so that if the motor root regenerates, the arc is not reestablished unless the sensory also recovers. Recovery of sphincteric control has been slow to appear, whether the lesion was distant to the segmental control area or involved the segmental area itself.

We must recognize the theoretical possibility of regeneration of tissues, whether the lesion occurred near the cauda, in the nerve root or in the cord substance. Remembering peripheral nerve regeneration and the proved possibility of aiding it by approximation of severed nerve ends, is it not reasonable to suppose a possible recovery for primary nerve roots and cord tissue?

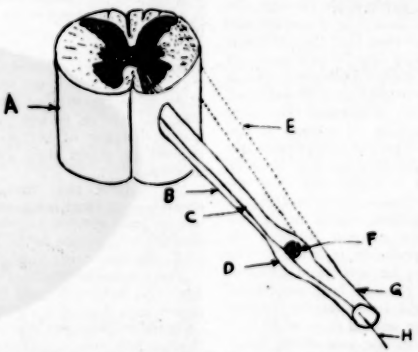

Fig. 1.—Anatomic details of posterior nerve roots: *A*, spinal cord (posterior view); *B*, posterior root; *C*, axon of sensory nerve; *D*, posterior root ganglion; *E*, anterior root (motor); *F*, ganglion cell (cell body and nucleus of sensory neuron); *G*, peripheral nerve; *H*, afferent nerve fiber (dendrite of ganglion cell).

The nerve cell probably functions in nutrition and regeneration of nerve fibers or axons. The nerve cells of the anterior, or motor roots, are situated within the gray matter of the anterior horns of the cord. The axons are, then, entirely peripheral to the cord. The cells of the posterior nerves are, however, situated in the posterior root ganglion, which in turn is situated near the intervertebral foramen. The posterior root may therefore be of considerable length, especially in the lumbar and sacral regions, forming the cauda equina. If the cell controls regeneration and nutrition, then regeneration following a lesion of the posterior root between ganglion and cord would be expected to proceed from the ganglion to the cord, while regeneration following a lesion of a peripheral nerve extends from the ganglion distally. As Tinel's sign, or distal tingling on percussion, is considered to be a function of regenerating sensory fibers, then this sign does not occur in lesions of the cauda equina, because of the protection of the vertebrae against stimulation of the regenerating portion of the nerve. After reaching the cord, the posterior root fibers become medullated cord fibers, without neurilemma, in which regeneration does not appear to occur clinically; hence the lack of sensory improvement in cauda lesions.

The fact that there has been no recovery of primary sensory roots or of cord lesions is significant, and vouched for by the neurologic surgeons in attendance in this series of cases. Except for relief of pressure, as by laminectomy or removal of shell or bone fragment, no operative measures have been attempted, and those minor ones were performed at the first hospital halt along the line of evacuation.

INCONTINENCE

Following through the various phases of incontinence, which came after a period of catheterization in all except one case, our patients have been observed to develop automatic bladders which have served them well, and cause no anxiety as to the ability to return to normal pursuits of living.

There have been examples of paradoxical incontinence, which occur early, or at the cessation of catheter practice, and of true incontinence, the condition which would persist in some instances were it not for the automaticity brought about by the patient's own effort and habit, and which in some cases still occurs, when the habit of regular scheduled nocturnal micturition is not carried out. In such cases the incontinence is readily taken care of by the nightly use of a urinal. Absolute incontinence occurs only very early or in the terminal state, according to our observations, owing, perhaps, to the relative youth of the patients.

After the establishment of incontinence, catheterization has never been necessary for the relief of bladder filling, and in this fact lies the great value of abstention from early catheterization, and the potential fact that infection, proved more deadly than obstruction, has been avoided.

When automatic bladder action was established, and the general wasting of these very sick patients controlled, the urea nitrogen retention subsided, and there was a synchronous increase in kidney function. During the two year period of further study, this relation, normal blood findings, balanced by functional test results of normal range, remained constant. All infection, save a mild cystitis in a few cases, subsided early.

One factor in the permanent damage resulting, of profound interest to the patient himself, and admitting serious drawbacks to morale and the desire of achievement, is the sex function loss. The patient broods terribly because of this, reports feeble erections, or seminal emissions, as though they were gold mines, and never gives up hope of returning power; the unfortunate part is that after the shock injury subsides, and the patient is convalescent, his sex ideas return.

It is easy to understand how large an item of importance in the prognosis is this probable permanent loss

of sex power. In tabetics and in prostatics we are dealing with another type, men who, while still hopeful, in some measure at least feel themselves guilty of overindulgence, and therefore deserving of loss of power. They may have attained an age at which they admit they are not far from the time of physiologic loss.

The rectal sphincteric involvement has continued a course parallel to that of the bladder; the patients take daily enemas and use liquid petrolatum or mild laxatives. If a strong drug is used, the bowel becomes incontinent; sensation of bowel evacuation is as absent as that of micturition. By roentgen-ray studies, a distinct tendency to visceroptosis has been noted; but such an occurrence may be the result of periods of emaciation early in the course of the disease, and of neurotrophic significance, rather than a factor increasing spastic bowel paralysis.

We still maintain that there is no element of back pressure on the kidney and ureter that might preface nitrogen retention and uremia, and be evidenced by a lowered kidney function. The low average kidney excretion is due to a certain amount of permanent renal fibrosis. Cystograms made in several cases show no reflux of the opaque solution into the ureters or kidneys.

RETENTION

In regard to the matter of bladder retention, the factor that links up these spine fracture cases to the prostatic syndrome, we may say that we have carefully determined residual urine amounts in as many cases as possible, exerting the utmost care to avoid infection in catheterization, and combining the investigation with function tests. We have found in each instance a surprisingly constant residual urine, and in nearly all, an extremely low one. The average we report is relatively high, we admit, but is arrived at by considering, along with the majority of cases, two or three running 800 c.c. (27 fluidounces) or more over the entire time of investigation. In this minority we still have no evidence of back pressure, and are led to presume that the bladder is still in the stage of relative tone, corresponding to that stage in prostatism which is the forerunner of the "don't care" stage of atonicity. The back pressure has not yet begun to collect its toll. The question naturally arises as to whether we should not take the case with a large retention in hand, and attempt to increase the ability of the patient to bring about a condition approaching normal emptying (for the automatic bladder type). By means of mass reflex stimulation or by occasional catheterization, improvement should be expected. With this idea in mind we selected two cases for the use of sinusoidal electrical stimulation.

SENSORY AND MOTOR PHENOMENA

Many peculiar phenomena of sensory nature, sometimes resulting in motor disturbances, such as persistent painful crampings, have been observed in these cases. Some have been fairly constant, and of much importance as neurologic evidence of disease. The manifestations have in several instances occupied regions above the zone supplied by the injured area in the cord or nerve roots.

Clinically, the patients have recovered a certain amount of motor power in all except one instance, that of the paraplegic patient who was referred to as being permanently an institutional case. All the patients were litter cases on admission to the hospital, and yet they had been ill many months. By the end of the first year, however, definite motor power had returned, and now every man, save one, is ambulatory. I wish to emphasize here that the motor nerve roots have shown evidence of return of function, while sensory losses have remained permanent.

The sensory nerve roots, then, lacking regeneration, have failed to demonstrate recovery; I consider this evidence, in all except one case, of a failure of return of the reflex control of the sphincters. Improvement from the state of automaticity will not take place, and we must tell the patient that his bladder will not improve.

Prognosis, then, depends on the recognition of the reflex arc control for sphincteric action, and the reasonably sure fact that the permanent break is on the sensory nerve root side. Explaining the persistence of sphincteric loss, when the lesion is in the cord, we turn to other types of cord lesions, and find a ready explanation in the accepted theory that cord tissue does not regenerate.

FINAL CONDITION OF PATIENTS

Clinically speaking, the patients have shown steady improvement, with gain in weight, return to normal color, and the return of blood pressure from approaching an asthenic state. We may picture a man, permanently lame, but young and eager to get around, and therefore managing to do so; a man who must at intervals resort to the closet and spend a little time forcing urine from his bladder; who must give himself an enema daily, and who otherwise may go about, a useful citizen. Doing this, we have the type exemplified by these recovered (?) shell fracture cases.

We have attempted by generalities to convey the late stages of this game against profound injury, as an entity; the bladder and kidney function has preserved an even keel, except in those cases in which there was severe infection and the patients succumbed early in the fight.

The various complications we might expect, due to bladder stasis, possible back pressure on the ureter and kidney, to early bed invalidism, to atrophy of parts, to neurotrophic injuries, local or general, and in view of early careless instrumentation, we have not encountered. We admit a certain amount of permanent renal fibrosis, dating back to the period immediately following injury.

In two cases coming to necropsy, not included in the twenty-nine of the series, having uremic symptoms as terminal findings, no hydronephrosis was found. This bears out the original contention that infection is the deadly element.

METHOD OF INVESTIGATION

Our manner of survey has been systematized along the lines followed in the study of the original series. Intervals elapsing by arbitrary choice, the periods of survey were chosen in an attempt at uniformity. During the time between surveys, routine urinalyses have been made every one to four weeks, and any chance symptom referable to bladder or kidney disease was immediately followed to its source for elimination or relation to the composite picture. The surveys have been made with no change of diet or other routine in which the patients lived. The prolongation of the stay in the hospital to more than two years has been for the purpose of securing under medical attention and guidance the maximum motor return, and not in any case because of the genito-urinary state.

Determination of residual urine, of kidney and bladder infection, of kidney function as estimated by excretion of phenolsulphonephthalein, and the chemical nature of the blood with regard to possible retention of

nitrogenous products has provided the skeleton for each survey. Further than this, we have been able to examine ten of the patients with the cystoscope, daring to do so with extreme care because each patient had existent infection, and in one instance because of the indication for determining whether the typical cystoscopic picture persisted with clinical bladder recovery.

Careful data were taken as to subjective symptoms also, including the occurrence of hyperhidrosis, sensory or motor disturbances, sex function, or the lack of sex function and ideas. Erections and emissions were recorded for reference.

The patient's statement as to the condition of his bowels, the sensation of bladder fulness, his schedule of micturition, and his method of voiding served as leading data also. Intercurrent treatment and progress were taken into consideration, and the relation of these to bladder and kidney function. Results were a series of repetitions. The cystoscopic picture was unchanged.

We have referred to our lack of treatment, and to two exceptions; we found in the few cases in which there were large amounts of residual urine that, by a sequence of catheterizations on several succeeding days, the residual diminished in amount. Each catheterization was followed by an argyrol instillation. In two cases we tried the sinusoidal wave treatment, advocated widely for bladder paralysis by physiotherapeutists. For ten weeks the daily treatments were continued. During the treatment in one instance, with the cystoscope in place we found that, simultaneously with the passage of the current, the bladder showed complete and violent contraction, and the ureters were seen to force out strong jets of urine at intervals. The ureters always contracted with the bladder. Both these experimental cases ended disastrously at about the expiration of the ten weeks, one man developing a massive ischiorectal abscess, and the other an acute epididymitis.

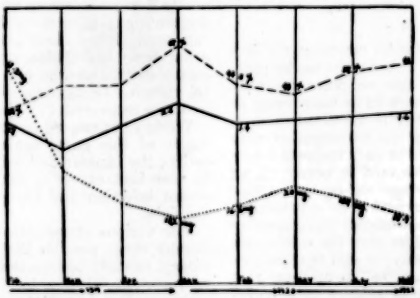

Fig. 2.—Dotted line, composite curve of fall of blood urea nitrogen; solid line, curve of percentage relationship of first and second hour phenolsulphonephthalein; broken line, relative upward curve of total phenolsulphonephthalein.

CYSTOSCOPIC EXAMINATION

The cystoscopic picture of the shell fracture cases may be thus summed up: normal or hypertonic contraction of the external sphincter; complete relaxation of the posterior urethra, the floor definitely falling away from the roof; the verumontanum plainly seen in most cases, appearing to lie in the floor of the bladder; the internal sphincter almost wholly obliterated as such, and the catheter drawing water on passing the external sphincter muscle, just as it would in cases of tabetic bladder; the trigon sometimes definitely atrophic, sometimes raised in ridgelike formation creating a bas fond; trabeculations found in every case, gigantic in size, as a rule transverse and coarse on the floor, rather evenly distributed on the lateral walls, and having their greatest complexity on all the faces surrounding the vertex. The level of the lesion apparently has nothing to do with either the functional activity of the bladder, or the secreting power of the kidney.

Adopting routine measures of careful inspection of the sphincteric region for atonicity, allowing visualization with the ordinary cystoscope, of the prostatic ducts, the verumontanum and the sinus pocularis, findings which, combined with intravesical trabeculations, indicate tabes or some other neurologic condition, we have discovered a very definite atonicity in twelve cases; none of these patients were proved to have any nerve lesion.

Pelouze,[2] in 1917, describing his method of search for manifestations of tuberculosis in the posterior urethra, states that in some cases, with a simple cystoscope, the posterior urethra may be visible while the fluid for distention is actually flowing into the bladder. We have been repeatedly called on to render opinions on suspected neurologic conditions, by bladder findings; but for cases other than tabes, our investigations hinged on other evidence have led nowhere.

The twelve instances of dilated internal sphincter and posterior urethra occurred among 350 cystoscopic examinations. The cystoscopic picture is similar to that described in shell fracture cases, except for a lack of trabeculations, and a tendency for the internal sphincter to retain some tone so that there is a zone of poor focus as the cystoscope is withdrawn over the sphincteric ridge. As the cystoscope is passed into the bladder, it is noted that there is no resistance after passing the cut-off muscle; on catheterization, however, usually urine is not found until the bladder itself is reached. We have decided that the condition may not exist except with the instrument in position.

The conditions recognized in the twelve patients were: enuresis, cause undetermined, two cases; ureteral stone, one case; prostatic abscess, two cases; kidney stone, two cases; recto-urethral fistula, one case; no disease, four cases. The spinal fluid examinations in several, all subjected to lumbar puncture, were negative.

While not satisfied that this finding of distinct changes means a pathologic condition, we feel that it may exist unrecognized in many cases, and that, when noted, it may mislead. In every instance trabeculations were absent or negligible. In any case, the bladders of normal individuals may approach the type commonly recognized as the result of myelitis, traumatic or infective.

Of the five patients with tabes, ranging in age from 22 to 35 years, in two no bladder changes were found; no deviation from normal in kidney function, and no bladder symptoms. Examinations were made after the patients were well along in the course of the disease, as was manifested by clinical and laboratory tests.

Three patients showed typical tabetic bladders according to Caulk's [3] description of the type exhibited

2. Pelouze, P. S.: Lymphoid and Cystic Bodies in the Urethra as an Evidence of Tuberculosis, J. Urol. 1: 367-382 (Aug.) 1917.

3. Caulk, J. R.; Greditzer, H.G., and Barnes, F. M.: Urologic Findings in Diseases of the Central Nervous System, J. A. M. A. 73: 1594-1599 (Nov. 22) 1919.

in tabes; they had urinary retention, and cystitis following persistent catheterization. They came to the hospital, one patient three months, two patients six months, after the onset of the retention. All were paraplegic, apparently from intensive intraspinal arsphenamin treatment. They demanded catheterization as their right.

Against the counsel of accepted ideas, we felt that these men might well profit by attaining automatic bladders; to them the idea was absurd, so we demonstrated the automatic bladder in our spine fracture cases, won them to the idea, and in ten days the two younger men were comfortably emptying their own bladders by straining with pressure on the abdominal wall, and massage over the bladder region. For six months two of the patients have continued with the true incontinence, controlled to an automatic degree, by the habit of emptying. Neither has residual urine of more than 60 c.c. (2 fluidounces). Neither has shown any diminution of kidney or bladder function. The third patient came to us with a violent nonsyphilitic urethritis, and a mixed infection of the bladder. Under local treatment he improved. For two or three months he was able partially to empty his bladder in the manner described; occasional catherization was necessary. Later, complete retention ensued, and within two months of that time he died, with bilateral pyonephrosis, prolonged hiccup, semistupor and uremic blood findings.

So much data regarding the tabetic cases are given as I feel that they link up closely, as to general handling and care, with the other type of case with paralytic bladders; I advocate the establishing of incontinence for tabes in lieu of repeated catheterizations, which always mean infection.

In a few cases of traumatic spinal cord and cauda injuries, coming under observation directly after the injury, we have been gratified to see the true incontinence established after from forty-eight to sixty-four hours of retention, with complete abstention from catheterization. Within ten days, the automatic emptying is in order, unless unconsciousness has supervened.

Of the twenty patients with shell fracture mentioned in the original report, six remain in the hospital; almost immediate discharge is pending for four of these; in addition, there are four patients in the hospital not included in the original twenty. I repeat, for its significance, that these men have not been kept for their bladder and rectal involvement. They have been free from any increase in sphincter loss, and might have long since returned to civil life, as far as bladder and kidney function are concerned.

Reference to the accompanying chart will show that the curve maintained by the plotting line representing phenolsulphonephthalein output in its relation to that of urea nitrogen holds the same relation as recorded in the previous report. When the urea nitrogen increased, the dye excretion was lowered, and vice versa. The relation of the first to the second hour excretion of dye was not so well maintained, although the relation showed a constant increase of the first over the second hour output.

CONCLUSIONS

1. Since the observations made by Dr. Plaggemeyer, and in most of the shell fracture cases, since the injury, there has been no return of the reflex nervous control of the bladder. From the neurologic standpoint, in general, there has been decided motor improvement, and less, if any, sensory improvement.

2. In several cases, partial sex function return is recorded; in one case the man married and reports normal sex power since the spring of 1920. His bladder picture returned to normal, and the only disability remaining is a slight sensory loss in the genitalia.

3. All except a few patients with shell fracture have recovered good general health, even though they may not have excellent kidney function. In the fatal cases the patients died early in the course of their disease, in every instance from kidney infection and uremia.

4. In all except the one case noted above, we believe that the bladders have retained the changes developing subsequent to the injury. Each patient carries a small amount of residual urine.

5. In no case has there been infection late in the progress; also, other complications have been avoided, owing to avoidance of catheterization as far as possible.

6. Of the two surviving patients who had had kidney infection, both came to operation, one for early drainage with complete recovery, and the other after more than a year, for nephrectomy. Of these two, one was the only patient of the entire series of twenty-nine not catheterized after the injury. He, it is interesting to note, is syphilitic.

7. Use of the sinusoidal current for bladder stimulation was apparently efficacious for a time, but in two cases serious complications developed.

8. Of supreme importance to the patients themselves, their general condition has improved to a point at which they are ambulatory, enjoying life to a degree seemingly impossible. Their bladders have taken on the automatic state, with which they can be entirely comfortable.

9. Hyperhidrosis, a constant finding in these cases, has persisted to a varying degree. All trophic ulcers have healed.

10. Repeated cystoscopy in one case had no detrimental effect; following nephrectomy for pyonephrosis of long standing, the patient improved and showed increase in kidney function.

11. The average amount of residual urine found in the cases included in this report was 260 c.c. (8¾ fluidounces). Two patients had a constant residual amount of 800 c.c. (27 fluidounces), making the average relatively high.

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Movement Alters Position of Brain.—There is no doubt that the normal brain obeys the law of gravity, and alters its position with varying positions of the head. Every organ of the body possesses a degree of mobility proportional to the extent to which it is covered by a serous membrane separating it from the wall of the cavity which contains it. The serous membranes of the thoracic and abdominal cavities, as well as those which line the joints and the tendon sheaths, result from and facilitate movement. The brain is no exception; the serous cavity lying between the dura and the arachnoid can fulfil no other purpose; the intense pain occasioned by any movement of the head in meningitis is analogous to that of pleurisy. Whenever the skull and dura are widely opened during an operation, movements of the brain can be demonstrated by altering the position of the head, and although their extent is probably exaggerated by reason of the different physical conditions which obtain in the open as compared with the closed skull, there is no reason to suppose that all movement is absent when the skull is whole.—Percy Sargent, *Brain* **44**:322, 1921.

THE SERUM PROPHYLAXIS OF MEASLES

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About 91 per cent. of deaths from measles occur in the first six years of life, and about 8 per cent. between the sixth and fourteenth years.[1] The general condition of the child plays an important part in the death rate. A death rate of 37 per cent. has been reported from a certain German orphanage, with an average of between 6 and 7 per cent. Patients from such institutions, who may be suffering from malnutrition, tuberculosis or some other chronic infection, have relatively poor chances for recovery.

It is difficult to prevent exposure to the disease because of the highly contagious four days' prodromal period during which there are no specific characteristic symptoms. Thus, the parent believes the child to be suffering from an acute cold, and he is seldom isolated from other children. It is, therefore, of the utmost importance to prevent the disease, or diminish its severity during the age from 5 months to 6 years, particularly in children who are in poor physical condition.

Herrman [2] attempted to convert the supposed temporary immunity of infants under 5 months to a permanent immunity by transferring to the nasal mucous membranes mucus taken from the nares of an afflicted child, twenty-four hours before the appearance of the rash. Of forty infants inoculated, four had been in intimate contact with patients with measles and did not contract the disease. In a discussion,[3] four years later, he asserted that only two of twenty-five children of his original series had contracted the disease. This method cannot be recommended strongly because of the danger of producing a severe attack of the disease in a susceptible infant and also of introducing other virulent organisms.

Richardson and Connor [4] reported the successful immunization of children exposed to measles by the injection of serum obtained from donors on the tenth day after disappearance of the fever. The majority of the recipients received 15 c.c. of serum. Maggiore [5] injects susceptible children, about to enter a hospital, with 2 c.c. of serum from convalescent patients, and double this amount on the following day.

Degkwitz,[1] employing the same principles, found that the optimal time to bleed the convalescent donor is between the seventh and fifteenth day after the disappearance of the fever, and that complete protection is afforded the recipient by the injection of 3.5 c.c. of serum before the end of the fourth day after exposure; the dose should be doubled if the injection is delayed until the sixth day. If less than 3 c.c. is given not later than the fourth day after exposure, the incubation period will be prolonged, and the severity of the symptoms markedly decreased. The symptoms may disappear at the end of thirty-six hours. On the other hand, relatively high doses of the serum given on the seventh day after exposure neither postpone the onset, nor lessen the severity of the attack. This is to be expected, according to the work of Blake and Trask,[6] who found that the virus of measles enters the blood not later than the seventh day. Following these principles, Degkwitz treated 172 children exposed to measles; in not a single instance did the disease develop.

Kutter,[7] using the same method, has reported the results of the injection of 145 children, four of whom had typical measles. He recommends the use of mixed serum.

The injection of the serum was tried out during a recent epidemic of moderate severity in Rochester. The donors were free from tuberculosis and syphilis, and had passed through fairly severe attacks of measles, without complications or sequelae. They were bled after an interval of five, seven or nine days from the disappearance of the fever. The serum was bottled in amounts of 6 c.c., preserved with 0.01 per cent. tricresol, and kept in the icebox until used. After varying periods following exposure, sixteen recipients were given 5 c.c. of the serum, injected into the muscles of the thigh. None of the children had ever had measles, although they had come in intimate contact with patients during the contagious period.

Four of the sixteen developed an extremely mild type of measles. The catarrhal and constitutional symptoms were very moderate, and the rash was exceedingly sparse, being limited to a few macules over the face and trunk. No complications or sequelae developed in any of the patients. In three of the four patients, the incubation period was lengthened to nineteen days.

Concerning the four failures, it should be mentioned that in three the serum used was obtained on the fifth day and in one on the seventh day. All recipients receiving serum obtained from donors on the ninth day after defervescence were protected. On the other hand, one patient (Case 7) injected on the fifth day of incubation developed measles, while another patient (Case 8) with the same history of exposure, and injected with the same serum on the sixth day of incubation, did not develop the disease. A brother and sister (Cases 15 and 14), with the same history of exposure received the same serum the same day, on the fourth day of incubation. One (Case 14) developed a mild attack of measles of the nineteenth day after exposure, and one (Case 15) remained well. Likewise, there is no explanation for the failures in two other instances, except that the infection was more overwhelming and that the serum was obtained from the donor too early.

The duration of the immunity has not been established. Degwitz and Kutter report that protection may last six months. In our series, one child who received 5 c.c. of serum, April 6, the fifth day of exposure, developed a fairly severe attack of the disease two months later.

On the discovery of measles in a home or institution, the exposed persons should be treated promptly. Since the Koplik spots, which constitute the first definite characteristic symptom of the disease, usually appear on the third or fourth day of the contagious period, and the rash not until the fifth or sixth day, it is apparent that the injection of the serum should not be delayed beyond the day of the appearance of the rash.

1. Degkwitz, R.: Ueber Masern-Rekonvaleszentenserum, Ztschr. f. Kinderh. **27**: 171-194, 1920.
2. Herrman, C.: Immunization Against Measles, Arch. Pediat. **32**: 503-507, 1915.
3. Herrman, C.: Discussion, Arch. Pediat. **38**: 100-102, 1921.
4. Richardson, D. L., and Connor, Hilary: Immunization Against Measles, J. A. M. A. **72**: 1044-1048 (April 12) 1919.
5. Maggiore, S.: Serum Prophylaxis of Measles, Pediatria **29**: 873, 1921.
6. Blake, F. G., and Trask, J. D., Jr.: Studies on Measles: Susceptibility of Monkeys to the Virus of Measles, J. Exper. Med. **38**: 385-412 (March) 1921.
7. Kutter, P.: Masernschutz durch Rekonvaleszentenserum, Ztschr. f. Kinderh. **30**: 90-99, 1921.

It is also to be remembered that patients whose measles has been attenuated are quite as capable of transferring the disease to a susceptible person as the patient with typical measles.

The nature of this immunity is not clear. The fact that the serum is most efficacious when obtained between the seventh and fifteenth days suggests a passive immunity, because at that time we would expect a maximum quantity of antibodies. The short period of protection and the relatively late administration of the serum would agree in pointing to the absence of any specific stimulator of antibodies. On the other hand, the observations of Degkwitz and Kutter suggest that under certain conditions an active immunity may be considered. Several exposed children were treated as late as the sixth day of incubation and remained well, and serum obtained several months later from these children protected other exposed children. This suggests that certain allergic reactions occur in the organism as early as six days after infection. The protection afforded by the early injection of serum in such small amounts is suggestive of a synergistic action in which the production of antibodies might be aided by a nonspecific stimulation. The solution of such problems, however, must await the definite isolation of the measles organism, and a study of its various biologic characteristics.

RESULTS OF SERUM INJECTION IN SIXTEEN CASES

Cases	Age, Years	Serum*	Time of Incubation Before Infection, Days	Results
1. J. B.	6	A	5	No measles
2. D. C.	4	A	6	No measles
3. E. G.	3	A	6	No measles
4. L. W.	3	A	7	No measles
5. E. Q.	1	A	5	No measles
6. R. D.	1	A	4	No measles
7. D. A.	5	B	5	Very mild measles; incubation period 12 days
8. D. L.	4	B	6	No measles
9. I. H.	7	B	5	Very mild measles; incubation period 19 days
10. V. A.	6	C	4	No measles
11. L. P.	8	C	6	Very mild measles; incubation period 19 days
12. F. M.	2	C	3	No measles
13. J. G.	1	D	4	No measles
14. R. O'C.	5	D	4	Very mild measles; incubation period 19 days
15. D. O'C.	11	D	4	No measles
16. C. H.	6	D	5	No measles

* A, serum was obtained from a donor nine days after defervescence; B, five days; C, five days, and D, seven days.

SUMMARY

1. The results in our short series of cases is convincing evidence of the efficacy of serum from patients convalescing from measles.

2. Sixteen children exposed to measles received intramuscular injections of 5 c.c. of serum obtained from healthy donors between the fifth and ninth days after the disappearance of the fever.

3. Twelve of the sixteen children injected remained free from measles, and four developed a mild form of the disease.

4. One child contracted measles two months after successful injection; this suggests that the immunity does not persist longer than sixty days in some cases.

5. The method recommends itself most highly for the prevention of measles during the period of danger, between the ages of 5 months and 6 years, in tuberculous children and in those physically below normal.

6. In institutions in which large numbers of frail children are intimately associated, the procedure would be of great value.

7. A marked attenuation of the disease with permanent immunity, but without complications or sequelae, would seem to be even more advantageous than the absolute but transient protection.

BASAL METABOLISM AND IDEAL WEIGHT AND PULSE RATIOS

AS SHOWN BY THE FINDINGS IN MORE THAN TWENTY-FIVE HUNDRED OBSERVATIONS ON ABOUT TWELVE HUNDRED SUBJECTS: A PRELIMINARY REPORT

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It occurs to us that the findings in a large series of basal metabolism observations—more than 2,500 on about 1,200 subjects—should have the wide circulation which only THE JOURNAL can give. These reports will be published in detail in special journals shortly, but we wish to make a preliminary report on the research because of the renewed interest in the activity of the thyroid gland as part of the general interest in the internal secretions; and because many ideas are current in regard to the overaction or underaction of the thyroid, which do not seem justified, or at least are controverted, by these findings. As a result, subjects are assumed to be hyperactive and treated as such on bare symptomatology such as irritable heart and loss of weight or after unreliable tests; while, on the other hand, many are fed thyroid on the assumption that increased weight or other symptoms are due to hypothyroidism.

When the Wassermann test was first employed, the findings of almost any technician were accepted; but with time it has become apparent that errors of technic are so common that clinicians now ask under what conditions and by whom the tests are made, before accepting them. They want to be sure of the accuracy of a finding which carries such far reaching effect.

Since the conclusions of such workers as Means and Aub, Benedict, Plummer and Du Bois, that the secretory activity of the thyroid is measurable by the determination of the energy transformation in a resting, fasting subject, this test—the so-called basal metabolism test—has assumed an importance akin to complement fixation blood chemistry and other laboratory tests; and the knowledge so gained is sufficiently indicative to make its accuracy of paramount importance.

As a prologue to a large research being made under the direction and with the cooperation of the co-author (W. W.), the author was asked to determine the following points in order, viz.: 1. The reliability of the tests and possibility of errors in the technic employed. Gas analysis being difficult and requiring specially trained workers, and the apparatus therefore being nonportable, both of which limit the broad employment of the test, we wished to try out a portable type, so simplified as to carry a minimum chance of error. 2. Whether the assumed interrelation of weight and thyroid activity is warranted; i. e., to study the possibility of diagnosing thyroid dysfunction by the weight of the subjects before us. 3. To check up on the ratios of pulse rate and basal metabolism in order to find if possible what might be the probable diagnosis from the

determined pulse rate of our subjects. 4. Similar relations of blood and pulse pressure, which seem desirable.

Fortunately, we had access to the records of the Battle Creek Sanitarium laboratories and to their clinical findings. The author had instituted there the technic which had been obtained in the Mayo Clinic with the open circuit (Tissot-Haldane) method; and for a period of eighteen months we had used this test and the closed circuit (Benedict) method interchangeably at the Battle Creek Sanitarium. We were thus enabled to tabulate the findings in various comparative ways.

Freed from all embellishments of detailed charts, bibliographies, arguments, etc., which are reserved for the fuller reports in special journals, the conclusions that may be published in a preliminary statement, are as follows:

RELIABILITY OF TESTS AND POSSIBILITY OF ERROR

The gas analysis and the Benedict methods have been used interchangeably on fifty-five subjects, one test following the other immediately and with the result shown in Table 1.

Analysis of this summary, together with the experience on more than 2,000 subjects tested each at least twice, though not on the same days, shows that this portable apparatus (as doubtless others also) is suitable for the test if done under proper conditions, since the variation is no greater than could be accounted for by errors, and is negligible. However, with increased

TABLE 1.—SUMMARY OF VARIATIONS

	Seventy-Seven Observations on Fifty-Five Subjects		
	Maximum Variation	Minimum Variation	Average Variation
Tissot vs. Benedict.....	12%*	0	3.2% net
Tissot vs. Tissot.....	4%	0	2 %
Benedict vs. Benedict....	4%	0	1.5%

* This relatively high variation was due to two subjects, one very nervous and one who traveled to the laboratory. Omitting these, the average variation figures less than 3 per cent.

experience it is patent that certain needs must be met for reliable results, namely, the breathing appliance must be tight and free from annoyance, and the subject must have rested all night and be perfectly quiescent for at least twenty minutes and must have fasted between twelve and fifteen hours. In other words, tests made on subjects who have not rested well the night before, or who have partaken of food or who have come from a distance to the laboratory or who are unduly excited, must be discarded as misleading.[1]

Having thus established the reliability of the portable apparatus, the making of tests in the bed at home is shown to be a feasible project; the laboratory may be taken to the patient. If the patient does not travel to the laboratory, another element of chance is eliminated.

POSSIBILITY OF DIAGNOSING THYROID DYSFUNCTION BY WEIGHT OF SUBJECT

As to the second problem, the basal metabolism has been charted against the ideal weight on 1,087 subjects (more than 2,300 observations) with the result given in Table 2.

BASAL METABOLISM AND IDEAL WEIGHT

These tests are more graphically summarized in Chart 1.

Analysis of these findings shows that, contrary to the usual belief not only of the profession but also of laymen generally, there is no cause and effect relation between weight and thyroid activity as evidenced by the basal metabolism tests; i. e., taking a whole group for study. Some proof of the theory of weight-thyroid interdependence is found in the outlying cases. There are thirty-two subjects of decidedly high metabolism (over 20 per cent.) and low weight (under 10 per cent. minus), cases which seem to support the theory. Of these, nineteen were diagnosed as exophthalmic goiter;

TABLE 2.—BASAL METABOLISM AND IDEAL WEIGHT

	Plus Basal Metabolism		Minus Basal Metabolism		
Men (a) (312)	Subjects		Subjects		
Underweight...	88 =	28.5%	144 =	46.1%	31.3 against theory
Overweight....	34 =	10.9%	46 =	14.8%	17.3 for theory
		17.3		31.3	14.0% net against
Women (b) (775)					
Underweight...	143 =	18.5%	287 =	37.0%	6.2 against theory
Overweight....	106 =	13.7%	239 =	30.8%	4.6 for theory
		4.6		6.2	1.6% net against
Combined table (c): Men and Women (1,087)					
Underweight...	231 =	21.3%	431 =	39.6%	13.4 against theory
Overweight....	140 =	12.9%	285 =	26.2%	8.4 for theory
		8.4		13.4	5.0% net against
Men and Women (366) (d) Metabolism above 10% and below —9%, thus excluding normals					
Underweight...	101 =	17.6%	253 =	44.1%	11.7 against theory
Overweight....	39 =	6.5%	196 =	32.4%	10.5 for theory
		10.5%		11.7	1.2% net against

but since, according to Plummer,[2] the loss of weight symptom is a late development in the exophthalmic syndrome, they after all agree with expectations.

There are twenty-two subjects showing overweight with high metabolism. Of these a diagnosis of hyperglycemia was made by the clinicians in all of the cases whose histories we were able to study. In general, with the high weights there is an excess of blood sugar.

It seems thus to be shown by this large grouping of findings that weight changes are determined by other endocrines—possibly the anabolic types—rather than by the catabolic group to which the thyroid belongs; and the conclusions should serve as a warning against the promiscuous administration of thyroid extracts in subjects of overweight; especially in view of the published experiments of Hashimoto, who found definite

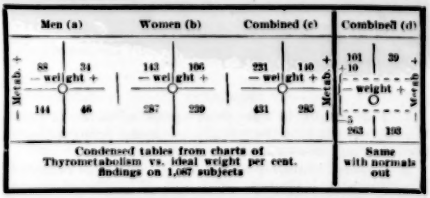

Chart 1.—Condensed table from charts of thyrometabolism versus ideal weight.

myocarditic lesions in animals fed with thyroid over prolonged periods or in large doses—lesions corresponding to those found in goiter hearts.

RATIO OF PULSE RATE AND BASAL METABOLISM

As to the third problem, in the accompanying chart is shown the condensed plotting curve of basal metabolism against what we have termed the "basal pulse rate"; that is, the pulse rate taken in the same resting,

1. An occasional check up of closed circuit, oxygen consumption apparatus against the open gas analysis method is necessary to assure results.

2. Plummer's sequence of symptoms is as follows: (1) mental excitation; (2) vasomotor disturbances; (3) tremor; (4) mental irritability; (5) tachycardia; (6) loss of strength; (7) cardiac insufficiency; (8) exophthalmos; (9) loss of weight; (10) diarrhea; (11) vomiting; (12) mental depression.

fasting, relaxed state required for basal metabolism. The pulse is so susceptible to body changes that some such standard is needed. The original chart of these findings is most interesting. It shows among other things that the mean rate of basal pulse in men is 66, while in women it is 74, a difference which is important.

Analysis of this chart shows the association of low pulse definitely with low metabolism with gradual ascent of curve of rising metabolism with increase in pulse rate, until at 0 of metabolism an average pulse rate of 85 is recorded. After that point is reached the metabolism shoots up with the increasing rapidity of the pulse rate until the runaway pulse is reached, after which it does not change much. There are, of course, many individual variations. For instance, there are many rapid hearts with low metabolism. Most of these cases have a diagnosis of cardiovascular disease. There are also a few cases of high metabolism with slow pulses; some of these we have followed back for diagnosis. They disclose quite a variety of diseases—one paralysis agitans, several gallbladder, one spleen disease and numerous combinations of cardiovascular disease with diabetes.

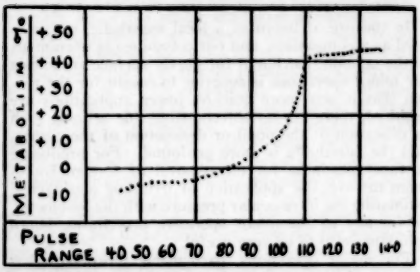

Chart 2.—Comparison of pulse and basal metabolism ranges in 1,153 subjects (more than 2,500 observations).

But it is evident from the observations taken as a whole—the first large group study that we have seen—that a pulse rate over 82 in men or 90 or over in women in a resting state is cause for suspicion of hyperthyroidism, and that a basal metabolism test is indicated for final judgment and is likely to show plus. Several observations have shown that when the pulse rate drops from a high normal in action to a normal or low "basal" rate, the basal metabolism is most likely to show normal or low. This harmonizes a large group finding with the case findings of Sturgis and Tompkins, who made 496 observations on 154 cases of hyperthyroidism at various periods, and concluded that "there is a fairly constant relationship between the pulse rate and metabolism," and that "an extreme degree of tachycardia suggests a greatly increased metabolism, while a slight tachycardia usually indicates a slight or moderate increase." Our tables show this for the large group of normals as well; and quite as emphatically they show that a low metabolism is indicated by a low pulse rate.

SUMMARY AND GENERAL CONCLUSIONS AS TO THE FIRST THREE PROBLEMS

The basal metabolism test is necessary for diagnosis and for therapeutic regulation. Its determination by tried out portable apparatus is reliable. The test is best made at the bedside of the subject, and the portable apparatus makes feasible its use in the home when proper technic is employed.

The mass of evidence is against weight being influenced to any consistent degree by thyroid activity alone as evidenced by basal metabolism tests. Obviously in some cases, as Biedl has shown, the thyroid is the hormone at fault; but the promiscuous employment of any thyroid therapy is dangerous, and had best be done under basal metabolism control.

No attempt is made by us to find why the thyroid is overacting or underacting; that is the domain of the clinician. We are merely recording the range of its activity as shown by the tests.

It seems fairly established that pulse rate and basal metabolism are closely associated generally.

Early diagnosis of hypothyroidism and hyperthyroidism is of great importance and should be made available more generally. But it must be freed of error to be of real value.

BUTYN, A NEW SYNTHETIC LOCAL ANESTHETIC: REPORT CONCERNING CLINICAL USE

SPECIAL REPORT OF THE COMMITTEE ON LOCAL ANESTHESIA OF THE SECTION ON OPHTHALMOLOGY OF THE AMERICAN MEDICAL ASSOCIATION *

ALBERT E. BULSON, JR., M.D.

FORT WAYNE, IND.

Council on Pharmacy and Chemistry of the American Medical Association—Gentlemen:

At your request the committee secured some samples of butyn, a new local anesthetic, which the manufacturers, the Abbott Laboratories, provided, and submitted it to animal experimentation and clinical trial. These experiments were begun several months ago by the individual members of the committee, and up to the present time seem to have been sufficiently extensive and conclusive to justify the report herewith submitted.

Though the committee was supplied with samples of powdered butyn, it was thought best to follow the suggestions of the manufacturers and experiment with a 2 per cent. solution, and later, under appropriate precautions, use solutions of great concentration. Accordingly, this report, except where otherwise noted, applies to results as obtained with the 2 per cent. solution.

In accordance with your suggestion, we recorded our observations as follows: anesthesia, including onset, depth, penetration and duration; side actions, including immediate and late irritation, changes in pupil diameter, vascularity, intra-ocular pressure, desiccation of cornea and other side actions; toxic systemic effects, and comparative value in ophthalmic work, including major as well as minor operations. Under these various headings our observations are as follows:

ANESTHESIA

Repeated trials indicate a striking rapidity of anesthetic action, as indicated by the fact that one minute after one instillation of a 2 per cent. solution of butyn in the eye, surface anesthesia is sufficient to

* This report was presented to the Council on Pharmacy and Chemistry. The Council considered the report and has authorized its publication. W. A. PUCKNER, Secretary.

permit of touching the cornea or removing superficially placed foreign bodies without discomfort. This surface anesthesia lasts from fifteen to twenty minutes, when, in the average case, it begins to subside. Occasionally the anesthesia has been noted for from twenty-five to thirty minutes. The depth of anesthesia produced by one instillation is not sufficient for operations, or for even the removal of deeply embedded foreign bodies in the cornea. It is, however, sufficient for the painless extraction of superficially placed foreign bodies, the application of irritating astringents, and the determination of intra-ocular pressure with the tonometer. When the number of instillations is increased, there is a marked increase in the depth, degree and duration of the anesthesia.

For operative work the committee has followed the plan generally used when cocain is the anesthetic employed, which consists in four instillations, three minutes apart, the operative work to be begun from five to ten minutes after the last instillation. This method resulted in the production of an anesthesia deep enough and complete enough for all of the commoner major operations on the eye, with the exception of enucleation, which up to the present time has not been performed under butyn anesthesia by any member of the committee. The height of anesthesia appears to be secured at about five to eight minutes after the fourth instillation of the anesthetic, and its duration is from twenty to thirty minutes in the average case, though frequently lasting much longer, and in a few instances even the surgical anesthesia has lasted for nearly an hour.

SIDE ACTIONS

One instillation of a 2 per cent. solution of butyn almost invariably produces a mild hyperemia of the conjunctiva. This hyperemia is not noticeably increased by subsequent instillations of the anesthetic. It is controlled readily by epinephrin solution, or may be averted by combining epinephrin with the butyn. When epinephrin is not employed, the hyperemia gradually disappears in from thirty to sixty minutes. The hyperemia seems to be more marked and of longer duration in diseased eyes, even though the active stage of disease has passed.

Butyn solutions do not affect the pupil diameter in any way, and produce no change in the intra-ocular pressure. There also is no desiccation or disturbance in the nutrition of the cornea, so far as has been determined. We also are of the opinion that butyn solutions do not deteriorate rapidly, even when exposed to air and light, nor is their anesthetic efficiency impaired by boiling.

TOXIC SYSTEMIC EFFECTS

In beginning the use of butyn, we were confronted with the statement of the Research Committee of your Council to the effect that butyn is two and one-half times more toxic than cocain when injected hypodermically into albino rats, and that the lethal dose of butyn when injected intravenously into cats is about equal to that of cocain. One member of our committee, Dr. H. M. Langdon, in conjunction with Dr. Herbert Fox, director of Pepper Clinical Laboratory of the University of Pennsylvania, has conducted some animal experiments with a view to determining the toxicity of butyn, and the result of those experiments confirmed those of the Research Committee of your Council. The manufacturers state that their animal experiments substantiate these findings.

However, in no instance, including the hundreds of times that butyn has been used by the members of the committee for minor as well as major operations on the eye, as well as in operative work in the nose and throat, have the slightest systemic toxic manifestations been noted. Following the report that surgeons and dentists had freely used butyn for surface and infiltrative anesthesia with no toxic results, some of the members of the committee have used butyn in paste and in concentrated solutions as a topical application for operative work in the nose as well as in the eye, with no evidence of toxic effects. The committee, in comparing the effects on animals and men, is inclined to believe, as suggested by Professor Sollmann of your Research Committee, that there may be (1) differences in absorbability from mucous membranes; (2) different ratio of toxicity in man and animals, and (3) different frequency of idiosyncrasies. It is probable that if butyn is used as extensively as cocain, there will be cases of toxic effects reported, and then it is a question to decide whether the symptoms are due partly to psychic causes, to idiosyncrasy, or to error in using more of the drug than required to produce the desired effect.

COMPARATIVE VALUE IN OPHTHALMIC WORK

In the use of butyn as a local anesthetic, cocain is used as a comparison, and our committee is unanimous in the opinion that butyn for purely surface anesthesia for minor operations is superior to cocain for the reason that it acts more quickly, fewer applications are required, there are no objectionable side actions, such as dilatation of the pupil or desiccation of the cornea, and the anesthesia is more profound. For producing surface anesthesia for the removal of foreign bodies from the eye, the application of irritating astringents, estimating the intra-ocular pressure with the tonometer, or for any of the minor operative procedures, butyn solutions seem to be very useful.

For major operations, particularly those requiring opening of the eyeball, such as iridectomy and cataract extraction, the technic usually employed in obtaining a cocain anesthesia is employed in obtaining butyn anesthesia. The use of a 2 per cent. solution of butyn results in a more profound anesthesia than is obtained with a 4 per cent. solution of cocain, and without any objectionable side actions. For operations on the extrinsic muscles of the eyeball the results are equal to those obtained with cocain, though the committee believes that a solution stronger than 2 per cent. may be preferable.

INFILTRATION ANESTHESIA

In view of our understanding that butyn might prove quite toxic, we did not at first use butyn for the production of infiltration anesthesia, and only recently have we undertaken some experimental work, using both 0.5 and 1 per cent. solutions for the purpose. While our experience is limited, up to the present time we have had very satisfactory results. A 0.5 per cent. solution of butyn has been injected rather freely into the tissues for the purpose of doing advancements of the extrinsic muscles of the eyeball, for the opening of abscesses in the orbit and the appendages, and as an adjunct in operations in which the eyeball is opened. In the few cases in which this has been tried, a deep and satisfactory anesthesia has been secured. A more comprehensive report covering infiltration anesthesia with butyn will be made later, and will form a part of the committee report to be presented before the Section

on Ophthalmology of the American Medical Association.

BUTYN IN NOSE AND THROAT WORK

The chairman of the committe has used butyn solutions as a routine for several months in nose and throat work, and the results, in brief, are considered worthy of being a part of this report, as they bear directly on the question under consideration.

The recognition of the fact that the nasal mucous membrane possesses greater area and increased absorbing surface, as compared to the conjunctiva, made it advisable to begin with weak solutions and use smaller amounts until the toxicity in the average human being could be determined. Therefore, at first one application of butyn in 1 per cent. solution was made over small areas within the nose, and tests for anesthesia were made subsequently at intervals of from one to three minutes. These tests indicated a mild surface anesthesia produced within one minute. Later these tests were extended to include surface anesthesia sufficient for everything pertaining to an examination, including the use of applicators and eustachian catheters, as also for the allaying of discomfort occasioned by the use of astringents or escharotics. Finally, butyn in 5 per cent. solution was employed as a routine in producing anesthesia for all of the major intranasal operations.

As butyn produces no ischemic effects, there is no shrinking of tissues following its use; hence the condition of the intranasal tissues remains approximately the same except for the anesthesia. This is a valuable feature in those cases in which a portion or all of a turbinate is to be removed. When combined with epinephrin, butyn in 5 per cent. solution produces an anesthesia sufficient for all of the major intranasal operations, including submucous resection of the septum, turbinotomies and intranasal operations on the accessory sinuses. Not only is the anesthesia very satisfactory, but up to the present time not the slightest toxic effects have been noted in the hundreds of operative cases in which the anesthetic has been used. Among these cases are thirty-eight consecutive submucous resections of the septum and twenty-six consecutive intranasal operations on the nasal accessory sinuses.

The technic employed in obtaining anesthesia has been similar to that employed in obtaining anesthesia from cocain, except that the butyn has not been used in greater concentration than 5 per cent. solutions. The anesthesia lasts from thirty to forty minutes.

EXCEPTIONS

In comparing butyn anesthesia with cocain anesthesia, the committee has discovered that occasionally a patient seems to be immune to complete local anesthesia from butyn employed in either 2 or 5 per cent. solution. These cases are relatively few. The failure to secure complete local anesthesia in this very limited number of cases may be due to psychic disturbances or a highly neurotic temperament, or perhaps to a peculiar idiosyncrasy which makes the patient, in a measure, intolerant to the anesthetic effect of the drug.

SUMMARY OF CLINICAL RESULTS

The committee now has a detailed record of clinical experiences with butyn in the performance of several hundred major operations on the eye and the nose and throat. These include cataract extraction, iridectomy (including that done for the relief of glaucoma), trephine operation, magnet extraction of foreign bodies, tenotomy and advancement of the ocular muscles, pterygium operations, removal of cysts and other tumors from the eyeball or lids, grattage, and a few cases of plastic surgery of the lids including the correction of entropion and ectropion. As yet no enucleations have been performed under butyn anesthesia, but we believe that such an operation may be performed very satisfactorily.

Local anesthesia is put to the best test when used for operations which involve cutting the iris or extrinsic muscles of the eyeball. The committee, December 1, had a record of thirty-nine cataract extractions combined with iridectomy, twenty-three iridectomies for glaucoma or as preliminary to cataract extraction, twenty-one capsulotomies and iridotomies, and eight muscle advancements, all satisfactorily done under butyn anesthesia. Aside from this there were a large number of other eye operations requiring less profound anesthesia which were performed satisfactorily under butyn.

In nose and throat surgery, butyn anesthesia has been used in practically all of the major intranasal operations, including submucous resection of the septum, turbinotomies, opening of accessory sinuses (including exenteration of the ethmoid cells), tonsillectomy and adenectomy, in all numbering nearly 200 cases.

In practically all of these cases, including nose and throat as well as the eye, the anesthesia has been very satisfactory, and the few exceptions are considered exceptions such as might occur under any local anesthetic. Two per cent. solutions of butyn were used for nearly all of the eye operations, whereas 5 per cent. solutions were used in most of the nose and throat operations. If more extended experience confirms our present belief that there is little cause for apprehension concerning toxic effects from the judicious use of butyn, then a 5 per cent. solution may be the strength of concentration preferred in some of the major operations in which profound local anesthesia is desirable and has heretofore been sometimes difficult to secure.

A detailed report of each and every one of our cases would extend this report to an unnecessary length, but will be submitted if deemed either advisable or necessary.

CONCLUSIONS

The results of the clinical and experimental use of butyn seem to justify the committee in arriving at the following conclusions:

1. It is more powerful than cocain, a smaller quantity being required.
2. It acts more rapidly than cocain.
3. Its action is more prolonged than that of cocain.
4. According to our experience to date, butyn in the quantity required is less toxic than cocain.
5. It produces no drying effect on tissues.
6. It produces no change in the size of the pupil.
7. It has no ischemic effect and therefore causes no shrinking of tissues.
8. It can be boiled without impairing its anesthetic efficiency.

Respectfully submitted,

ALBERT E. BULSON, Jr., Fort Wayne, Chairman.
WILLIAM ZENTMAYER, Philadelphia.
EDGAR S. THOMSON, New York City.
H. MAXWELL LANGDON, Philadelphia.
HARRY S. GRADLE, Chicago.

Clinical Notes, Suggestions, and New Instruments

A FATAL CASE OF ACUTE ARTICULAR RHEUMATISM *

MORRIS DINNERSTEIN, M.D., NEW YORK

The infrequency of a fatal outcome in acute rheumatic fever, especially during the first attack, and the unusual clinical features, prompt me to report this case. Various authors give the average mortality during the acute stage as being between 2 and 4 per cent., death usually taking place from hyperpyrexia associated with cerebral manifestations. In the wards of Bellevue Hospital, over the period extending from Jan. 1, 1919, to July 1, 1921, there were 631 cases of acute articular rheumatism, nine of which were fatal, a mortality rate of about 1.5 per cent. In 1916, in the registration area of the United States, 3,285 deaths were reported from acute rheumatic fever, nearly half of which were in patients over 40 years of age. But the correctness of diagnosis in many of these cases is open to doubt; for, as Swift points out, clinical experience teaches us that the vast majority of the cases of rheumatic fever occur during the first four decades. The disease is difficult to recognize at necropsy if one is not cognizant of the clinical features during life and if the myocardium, especially in the region of the base of the valves and papillary muscles, is not carefully examined microscopically for the pathognomonic submiliary nodules of Aschoff. The other lesions usually associated with acute articular rheumatism, pleuritis, pericarditis and verrucous endocarditis, may be seen in other conditions; the latter may occur as a terminal manifestation in many chronic diseases.

REPORT OF CASE

History.—A man, aged 26, a soldier, was admitted to the surgical service complaining of pain of three days' duration in the umbilical and both lumbar regions. The history was essentially negative except for an attack of influenza in 1918. There had been no rheumatism. The present illness was ushered in by a severe chill lasting five or six hours followed by fever and profuse sweating. Three hours later, the patient experienced severe cramplike pain, aggravated by motion, in the region of the umbilicus and the right lower quadrant and both lumbar regions. There was vomiting on the first day of his illness following the ingestion of castor oil.

Examination.—On admission to the hospital, the patient appeared acutely ill; the temperature was 103.4 F.; respiration, 28, and the pulse, 92. There was diffuse abdominal tenderness, most marked over the upper portion of the abdomen. There was no rigidity, however. The patient appeared to be sensitive to touch over the body, and this was especially marked over the larger joints. There was, however, no redness, swelling or other local evidence of any inflammatory process in the joints. Scattered over the dorsum of the right wrist and right ankle were several pea-sized, tender, erythematous areas. Examination of the heart revealed a soft mitral systolic murmur and an accentuated and reduplicated pulmonic second sound. There was no evidence of cardiac enlargement. The urine showed a moderate trace of albumin. The white blood count was 32,400; 85 per cent. polymorphonuclears and 15 per cent. lymphocytes.

Clinical Course.—The temperature ranged between 103 and 104 for the first three days, and then gradually subsided; with the fall in temperature, the abdominal signs and symptoms disappeared. Five days after admission, there was a recurrence of the abdominal pain, and, in addition, marked abdominal distention, especially involving the stomach. There was no evidence of peristaltic movements, but there was diffuse tenderness, most marked over the umbilical region and in the flanks. The bowels were constipated, but there was no vomiting. The temperature ranged between 101 and 103. The joint symptoms gradually subsided, and over the left lower chest posteriorly there were noted signs indicative of fluid. Exploratory thoracentesis yielded some pale, slightly turbid fluid containing many epithelial and mononuclear cells and a few polymorphonuclears, but no organisms on smear or culture. The following day, signs of a moderate effusion at the right base were noted, and the abdominal signs and symptoms gradually subsided. The blood culture was sterile on two occasions. The temperature then ranged between 99 and 101, and one week after admission there was marked swelling and tenderness of the right wrist joint and, in addition to a mitral systolic murmur, a faint but distinct aortic diastolic murmur was heard. The other peripheral vascular phenomena of aortic regurgitation, namely, Corrigan pulse, pistol shot, and capillary pulse, were present. There was no evidence of cardiac enlargement. At this time, the white blood count was 27,600; 84 per cent. polymorphonuclears and 16 per cent. lymphocytes. Ten days after the detection of the aortic diastolic murmur, a pleurocardial friction sound was heard to the left of the sternum. The respirations became more embarrassed, and the patient complained of severe epigastric and precordial distress. The left wrist became swollen and tender, and the following day a to-and-fro shuffle-board pericardial friction sound was detected to the left of the sternum in the second and third left interspaces. This murmur varied in character and intensity from day to day, and on several occasions disappeared entirely. The area of cardiac dulness increased in size, and there was flatness, bronchial breathing and bronchial voice and subcrepitant râles over both bases. The face became puffy, and the ankles and feet were edematous. The urine showed a moderate trace of albumin, and a few granular and hyaline casts, and many red and white blood cells. The chest was aspirated on several occasions, and 700 c.c. was removed from the right chest, and 800 c.c. from the left. The patient became more and more dyspneic, the pulse ranged between 120 and 140, the temperature remained between 98 and 100, and the patient died on the sixty-sixth day of his illness, the temperature at no time exceeding 104 F.

Treatment.—In the management of the patient, the following measures were resorted to: For the attacks of abdominal pain and distention, hot turpentine stupes were applied, and high hot colon irrigations and gastric lavage were given. For the arthritic manifestations, salicylates, 20 grains (1.3 gm.) in combination with sodium bicarbonate, 40 grains (2.6 gm.) were administered every four hours for four days. Oil of wintergreen was applied to the affected joints. Tincture of digitalis was employed with the onset of the cardiac signs and symptoms, and sedatives of the bromid and morphin groups were given for the nocturnal restlessness. Thoracentesis, as mentioned above, was done to relieve the mechanical embarrassment of the heart action.

COMMENT

The case presented several very unusual clinical features. The abrupt onset with severe abdominal pain, simulating very closely an acute surgical condition, is not common. The abdominal pain in this disease may be a referred pain from a rheumatic diaphragmatic pleurisy, or, very occasionally, it may be part of the syndrome of Henoch's purpura. No eruption other than an erythema was noted, and there was no blood in the stools. Abdominal pain has also been observed as the initial symptom in a few of our cases of rheumatic pericarditis.

The high fever, leukocytosis and constitutional symptoms out of proportion to the arthritic manifestations were other striking features in this patient. The same phenomena were observed in several of the cases during the past season. The renal complication will be considered later. Another curious feature was the difficulty in differentiating this disease from sepsis. The irregular fever, high leukocytosis, the appearance of an aortic diastolic murmur, and the joint manifestations suggested that diagnosis, but the appearance of so typical a complication as pericarditis with associated pleurisy pointed to acute articular rheumatism. Pericarditis is very rare in sepsis, unless it is secondary to myocardial infarction, or a complicating terminal pneumonia. The absence of splenic enlargement and of any evidence of embolic mischief were against a septic condition. It is unlikely that embolism ever takes place in acute rheumatic fever because of the firm consistency and small size of the vegetations.

The necropsy revealed the anatomic findings associated with acute rheumatic fever. Each pleural cavity contained about 200 c.c. of yellow, slightly turbid fluid. Loose pleuro-

* From the Wards of the First Medical Division (Columbia University) Bellevue Hospital.

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pericardial adhesions were present. The most interesting findings were in the heart and kidneys. The visceral and parietal layers of the pericardium were loosely adherent, and on being separated, left a rough, ragged hemorrhagic surface. There was no evidence of free or sacculated fluid. The mitral valve showed the typical fine, beadlike vegetations along the line of closure, and similar wartlike nodules were present on all the cusps of the aortic valve. The tricuspid and pulmonary valves were normal. None of the valves showed any evidence of an old valvulitis. There was no thickening, scarring or retraction of any of the leaflets. The heart muscle was very flabby, and was pale, brownish red. Microscopic examination of the myocardium revealed the pathognomonic histologic findings of this disease, namely, the submiliary nodule of Aschoff. This peculiar cellular response occurs only in cases of acute articular rheumatism, and in this case they were strikingly numerous and widely distributed. They are found especially along the smaller vessels and, as Aschoff originally pointed out, are closely related with the adventitia. The characteristic cell is a large, clear cell with a large, pale, vesicular nucleus, often multiple and containing a prominent nucleolus. In the neighborhood of these large cells, there are also many large and small mononuclear cells and a few polymorphonuclears. A few showed scattered eosinophils. The rest of the myocardium appeared normal. The vessels appeared patent throughout.

The origin of these large cells constituting the Aschoff body is still a matter of controversy. Aschoff's original contention was that they were derived from the adventitial wandering cells. Others believed they arose from the intramuscular connective tissue cells. Recently, Whitman and Eastlake brought forth some evidence that in certain cases they result from the degeneration and proliferation of the nuclei of the muscle-cells, having observed the presence of striae at the periphery of the cell. They believe that the process may begin as a minute infarct, but this is quite unlikely in view of the absence of embolic disorder elsewhere. The Aschoff bodies are probably the forerunners of the scattered areas of scar tissue so frequently encountered in old rheumatic hearts. They have as yet not been reproduced experimentally, though similar lesions, so-called Bracht-Wachter bodies, consisting of a focalized collection of connective tissue cells with lymphocytes, have been noted (by Cecil, Thalheimer and Rothschild, and others) in the heart muscle of animals injected intravenously with *Streptococcus viridans*. Bracht and Wachter have produced such lesions in rabbits with intravenous injections of streptococci isolated from cases of acute articular rheumatism. Schloss and Foster have also produced such lesions in monkeys following injections of hemolytic streptococci. But in none of the experiments and also in none of the human cases of endocarditis, other than rheumatism, did the myocardium show cellular deposits which were histologically comparable to the Aschoff body, except in their focalized character.

The alterations in the kidneys were also very striking. Except for slight fibrous thickening of the capsule, the glomeruli appeared normal. The changes were confined chiefly to the tubules and to the interstitial tissue, especially of the medullary portion. The lining epithelium of the tubules showed varying stages of disintegration, and the lumen was filled with red blood cells, casts and polymorphonuclears and lymphocytes. Scattered throughout the interstitial tissue, there were innumerable foci of lymphocytes and plasma cells, and in some places there was a considerable accumulation of polymorphonuclear cells. The lesion appears to be a combined acute tubular and interstitial nephritis, not unlike Delafield's acute exudative nephritis, or the type of renal lesion that Councilman has described in cases of scarlatina and other acute infectious diseases. This picture is entirely different from the renal lesion in cases of bacterial endocarditis in which the glomeruli are chiefly involved. Various writers have pointed out the not infrequent association of chronic cardiovalvular disease with chronic interstitial nephritis. Though in some cases this may be a mere coincidence, it is not unlikely that the renal lesion may represent repeated mild and possibly unrecognized attacks by the rheumatic virus, just as the old endocardial lesions are usually the end-result of one or more attacks of acute rheumatic endocarditis.

SUMMARY

The case reported is one of acute rheumatic fever terminating in death on the sixty-sixth day. The course of the disease was unusual. The onset suggested an acute abdominal condition and, though the constitutional symptoms were pronounced, and cardiac, pleural and renal involvement occurred, arthritic manifestations were slight. The clinical diagnosis was confirmed by the finding of Aschoff bodies in the myocardium.

A CASE OF OSTEOMYELITIS OF THE FIRST LUMBAR VERTEBRA

GEORGE BRAUNLICH, M.D., DAVENPORT, IOWA

M. C., aged 15, a schoolboy, referred to me, Dec. 29, 1921, had jumped from a wall about 10 feet (3 meters) in height, about December 15, landing on his feet. He complained of severe pain in the lumbar spine at that time. This pain gradually disappeared. About December 22, after being active for a week, he again complained of severe pain in the lumbar region. At this time he was unable to move his legs or to pass urine. As well as I can make out from careful questioning, this paralysis came on very suddenly on about December 22. I had the patient removed to Mercy Hospital, December 29.

Next day the patient was very restless and apprehensive as to his condition. His head was drawn back. The legs were resting on pillows. The slightest touch caused him to groan. The pupils reacted to light and accommodation. Other eye signs were negative. The throat, lungs and heart were normal. The abdomen was moderately distended and rigid. There was no tenderness, except for general hyperesthesia. All the reflexes in the lower extremity were absent. He was unable to move his legs or wriggle his toes. There was slight movement in the adductor group of muscles when he attempted to move his legs. Sensation of heat, cold and touch were everywhere present. There was marked tenderness on pressure everywhere in the lumbar region. The patient could be moved from the supine position only with great difficulty because of pain in the back. The leukocyte count was 54,200. Examination of the urine revealed albumin, pus and bacteria. The patient had been catherized twice daily for a week. Lumbar puncture yielded fluid apparently not under pressure. Only 6 c.c. was obtainable. The fluid was amber and clear. It coagulated to a solid jelly in about five minutes. No cells or bacteria could be found on microscopic examination. Roentgen-ray examination of the spine, December 31, revealed a faint, indefinite shadow extending along the spine on both sides. Nothing wrong with the vertebrae was detected. The roentgenogram was rather unsatisfactory because the intestine could not be thoroughly emptied. There was a gradual accumulation of feces in the intestine. The bowels moved somewhat after cathartics and enemas, but the patient had no control over his bowels.

The temperature from Dec. 29, 1921, to Jan. 1, 1922, varied between 101 and 103; the pulse, from 96 to 122; respiration, from 22 to 36. January 2, the temperature began to go up. At 7 p. m. the axillary temperature was 105. The respiration rate was 44. The respiration then began to be labored. He died at 10:30 p. m.

A partial necropsy was held, January 3. The body had been embalmed the night before.

An incision was made in the back along the spines of the vertebrae. In the lumbar region pus began to appear before the vertebrae were reached. The lumbar muscles were infiltrated with pus. There was pus along the entire spine from the sacrum to the skull. The spine was opened and pus was found within the spine along its entire length. This pus was outside the meninges. Within the meninges was a small amount of clear fluid. The meninges and cord were not inflamed. The body of the first lumbar vertebra was necrotic. Pus also extended in front of the spine along its entire length. Microscopic examinations were not made, as we promised the boy's mother to remove nothing from the body.

SUMMARY

A slight injury to the spine due to a jump from a wall caused osteomyelitis of the first lumbar vertebra. Pus from

this vertebra burrowed both anteriorly and posteriorly along and within the spine, but remained outside the meninges. Pressure on the cord by this pus caused paralysis of the legs and bladder. This pressure on the cord also caused the rather unusual spinal fluid changes. As this pus rose within the spine, pressure on the medulla affected the respiration and temperature centers, causing death.

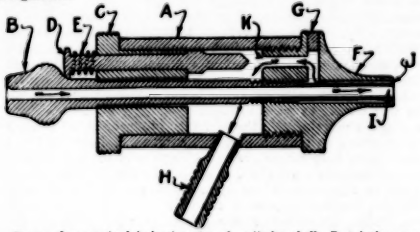
203 Security Building.

RETURN FLOW URETHRAL IRRIGATING TIP FOR ANTERIOR URETHRA OR BLADDER IRRIGATIONS

DANIEL E. SHEA, M.D., HARTFORD, CONN.

Director, Bureau of Venereal Diseases, Connecticut State Department of Health; Acting Assistant Surgeon, U. S. Public Health Service

Several years ago I endeavored to perfect a urethral irrigating tip which would wash out the anterior urethra, and allow the waste solution to return without removal of the tip. At that time we had such an instrument, but it did not prove practical, and the idea was abandoned. Recently I resumed work on this idea, and the accompanying sketch is a practical tip which may be used for irrigating the urethra, and, by a simple adjustment, it may be used for bladder irrigations.



Return flow urethral irrigating tip: *A*, cylinder shell; *B*, solution carrier which is attached to irrigating tube; *C*, removable top which seals tip; *D*, control valve which shuts off return flow; *E*, spring which releases control valve; *F*, tip which is inserted into urethra; *G*, plug which prevents return flow from leaking; *H*, return flow outlet; *I*, inlet through which solution reaches urethra; *J*, outlet through which returning solution flows; *K*, valve seat which receives control (*D*) and shuts off return flow. The material is of heavy brass, nickel plated.

The working principle of this instrument is as follows: The tip is attached at *B* to a rubber tubing which runs from the receptacle containing the solution to be used. The solution flows through the carrier *B*, entering the urethra at *I*, the point *F* being inserted at the meatus. The return flow from the urethra enters the chamber through *J* and flows out at the point *H* into the sink or a basin. To force the solution into the posterior urethra and bladder, the valve *D* is pressed with the finger, and seats itself at *K*, preventing the solution from returning.

The instrument, which consists of five parts, may be taken apart, allowing it to be cleaned and sterilized when needed. The five parts are *A*, *B*, *C*, *F* and *H*.

54 Church Street.

METHOD FOR ANCHORING RADIUM IN CARCINOMA OF THE LARGE BOWEL

J. RAWSON PENNINGTON, M.D., CHICAGO

In carcinoma of the rectum and pelvic colon, application of radium on a flexible rod is unsatisfactory, especially if the growth is at the upper portion of the rectum, the rectosigmoid junction, or the pelvic colon itself. When the carcinomatous stricture is of small caliber, one may suppose the radium is well up in the mass, when as a matter of fact it merely impinges against the lower edge. There is a similar difficulty when one endeavors to carry it down from a colostomy opening.

To overcome these objections, I passed a beaded seton through the pelvic colon and rectum beyond the colostomy. In this instance the distance from the verge of the anus to the nearest edge of the growth was 4 inches (10 cm.). Accordingly, a piece of braided silk of sufficient length was taken, and threaded through half a dozen perforated buckshot; the latter were tied 4 inches apart, and the radium attached to the seton. Now, by pulling on the opposite end, the radium was located in one sitting on the proximal, and—in the next—at the distal extremity of the carcinomatous mass.

With the present method of strapping the tube to the body after locating its site accurately, the tube may move, and there is no assurance that it will remain where the destructive action is to be exerted. Again, if radium is fixed to the body, the peristalsis may change the relation between the growth and the radium, as may contraction of the sphincter and the levator ani, though when the bowel is severed, as in colostomy, the peristalsis is modified if not entirely dissipated. By the plan proposed here, after the distance of the growth from either the colostomy or the anal opening has been determined, the radium can be readily placed and maintained in the exact position desired, with no inconvenience to the patient. Bismuth emulsion may be injected through the stoma to disclose irregularities in the ulcerated walls of the bowel.

The objection to radium and roentgen rays in deep-seated structures has been that of passing the rays through the intervening healthy tissues. By this method the radium is in direct contact with the growth. The same principle might be employed in carcinoma higher up in the colon—a cecostomy first being done, and a seton next being passed through the entire colon and rectum. In carcinoma of the esophagus or stomach, a stoma might be made in the latter; or the seton might be passed through the nasal cavity and mouth for the same purpose.

A few precautions are necessary for this apparently novel procedure: The colostomy should be made with a distinct spur preparatory to closing the stoma if the radium treatment is successful. Both ends of the radium container must be fastened to the seton, and the latter must not be removed until the treatment is finished.

31 North State Street.

EPITHELIOMA OF THE LIP

ELMER D. TWYMAN, M.D., KANSAS CITY, MO.

Standard textbooks on surgery advise removal of the local lesion in cases of lip cancer by a V-shaped incision through all the thicknesses of the lip in a vertical direction. This method does not take into account the observation that is the gist of this communication: that the trend of growth in cancer of the lower lip is outward and downward rather than directly downward, and that the usual metastasis is to the submaxillary rather than to the submental group of lymph glands.

If my conclusion, based on observation of forty-four cases, will hold for even the majority of such tumors, it should follow that the fact has not escaped the many shrewd observers of cancer who have much more material at their disposal and in that sense is not a new observation. However, if it is even measurably true, it can justly be said that the fact has not received enough attention and has not been sufficiently considered in the above-mentioned method of removal by surgical means. It is evident that involved tissue may be left in the lateral inferior angle of the wound unless the V removed is quite extensive and takes much more tissue below than is necessary. Indeed, several of the more extensive plans of removal bear marks of having been planned more with the idea of facilitating the closure of the defect than of considering what resection would give the least danger of recurrence. With this idea in mind I have tried to record the facts observed in the cases that I have been fortunate enough to see, and I have prepared a tabulation which, of course, is too dogmatic. It shows the following:

The body of the tumor (epithelioma of the lower lip, beginning at the mucocutaneous junction), presumably formed by

contiguous growth, spreads outward and downward on the mucous membrane side, or inner aspect of the lip, and can often be seen or palpated under the mucosa, sometimes as far as the alveolar process. This contiguous growth is in the direction of, or parallel to, or perhaps directly in the lymph trunks leading to the submaxillary glands. The usual metastasis is to the submaxillary glands first rather than to the submental group.

The different layers of the lip are unequally involved. The growth tends to spread on the inner side rather than on the skin side. The fascia covering the muscularis seems to be the cleavage line. As has been frequently noted, the chin is seldom involved, even in late cases.

Exceptions to these rules have been seen in those cases that have been treated with pastes, or other escharotics, or when long standing with infection has produced ulceration, so that growth extends on the skin side, and much of the lip is destroyed or involved, and the submental glands are also infected. Other exceptions include cases treated by operation with recurrence, or by the insertion of radium needles, or other sources of the formation of scar tissue or opening of new spaces. Scar tissue, like cartilage (as observed by Sutton), seems to act as a framework, or ladder, for the growth of epithelial recurrence. If the spaces on the skin side of the lip have been opened, as by the action of a paste, the body of the growth may proceed superficially along the trunks leading either to the submaxillary glands or to the submental group in the same manner as a growth originating in a skin mole. In a case of the latter kind, however, I was able to demonstrate that it was not the whole thickness of the lip that was involved, but only the layers down to the muscularis (a converse demonstration of the thesis as regards the lip type that grows primarily toward the mucous side).

Direct inspection and palpation are usually sufficient to determine the facts in a given case, and should be used in determining the field and scope of operation, or of treatment if radium or irradiation is to be used.

416 Argyle Building.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION. W. A. PUCKNER, SECRETARY.

ANIMAL EPIDERMAL EXTRACT ALLERGENS-SQUIBB.—Powders representing the alkali-soluble protein from the hair and epidermis of animals or from the feathers of fowls.

Actions and Uses.—Animal Epidermal Extract Allergens-Squibb are employed for the diagnosis of asthma or perennial rhinitis. The patient's susceptibility may be tested in the same manner as that employed for pollen extracts. They are not intended for treatment.

Manufactured by E. R. Squibb & Sons, New York. No U. S. patents or trademarks.

Burro Dander Allergen-Squibb.—The protein from the dander of the burro.

Burro Hair Allergen-Squibb.—The protein from the hair of the burro.

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Cat Hair Allergen-Squibb.—The protein from the hair of the cat.

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Dog Hair Allergen-Squibb.—The protein from the hair of the dog.

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Horse Hair Allergen-Squibb.—The protein from the hair of the horse.

Rabbit Dander Allergen-Squibb.—The protein from the dander of the rabbit.

Rabbit Hair Allergen-Squibb.—The protein from the hair of the rabbit.

Burro Dander Allergen-Squibb, Burro Hair Allergen-Squibb, Cat Dander Allergen-Squibb, Cat Hair Allergen-Squibb, Chicken Feathers Allergen-Squibb, Cow Dander Allergen-Squibb, Cow Hair Allergen-Squibb, Dog Dander Allergen-Squibb, Dog Hair Allergen-Squibb, Duck Feathers Allergen-Squibb, Goose Feathers Allergen-Squibb, Horse Dander Allergen-Squibb, Horse Hair Allergen-Squibb, Rabbit Dander Allergen-Squibb and Rabbit Hair Allergen-Squibb are prepared by the following method:

The finely divided hair, dander or feathers are extracted with 0.2 per cent. sodium hydroxide solution, and hydrochloric acid is added to the filtered solution until the iso-electric point of the dissolved protein is reached. The precipitate is collected on a filter, washed and dried with acetone.

BACTERIAL ALLERGENS-SQUIBB.—Protein extracted from bacterial cells.

Actions and Uses.—Bacterial proteins have been used cutaneously for the diagnosis of anaphylaxis to the metabolic products from specific bacteria. Their utility is debatable.

Manufactured by E. R. Squibb & Sons, New York. No U. S. patents or trademarks.

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Bacillus Pertussis Allergen-Squibb.—The protein from *Bacillus pertussis.*

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Catarrhalis Allergen-Squibb.—The protein from *Micrococcus catarrhalis.*

Gonococcus Allergen-Squibb.—The protein from the gonococcus.

Pneumococcus-I Allergen-Squibb.—The protein from the pneumococcus Type I.

Pneumococcus-II Allergen-Squibb.—The protein from the pneumococcus Type II.

Pneumococcus-III Allergen-Squibb.—The protein from the pneumococcus Type III.

Pneumococcus-IV Allergen-Squibb.—The protein from the pneumococcus Group IV.

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Staphylococcus Aureus Allergen-Squibb.—The protein from *Staphylococcus aureus.*

Streptococcus Pyogenes Allergen-Squibb.—The protein from *Streptococcus pyogenes.*

Streptococcus Viridans Allergen-Squibb.—The protein from *Streptococcus viridans.*

Bacillus Coli Allergen-Squibb, Bacillus Pertussis Allergen-Squibb, Bacillus Typhosus Allergen-Squibb, Catarrhalis Allergen-Squibb, Gonococcus Allergen-Squibb, Pneumococcus-I Allergen-Squibb, Pneumococcus-II Allergen-Squibb, Pneumococcus-III Allergen-Squibb, Pneumococcus-IV Allergen-Squibb, Staphylococcus Albus Allergen-Squibb, Staphylococcus Aureus Allergen-Squibb, Streptococcus Pyogenes Allergen-Squibb and Streptococcus Viridans Allergen-Squibb are prepared by the following method:

Seed tubes are inoculated from stock cultures, and seed agar bottles are inoculated from seed tubes. After twenty-four hours' growth, the seed bottles are examined for purity of culture, the bottles washed off with 0.4 per cent. cresol and physiological solution of sodium chloride. The contents are centrifuged and the liquor decanted. The organism is rewashed and centrifuged again. The organism is extracted with 0.2 per cent. sodium hydroxide solution, filtered and the filtrate is brought to the iso-electric point of the protein by the addition of hydrochloric acid. The purified bacterial protein is filtered off and dried with anhydrous acetone.

Bacterial Allergens-Squibb are white powders; insoluble in water, salt solution, or acid, but readily soluble in dilute alkali.

Infant Mortality Under One Year.—Approximately 48 per cent. of all deaths under 1 year of age in the registration area for 1919 occurred during the first month of life—43 per cent. from natal and prenatal causes; 20 per cent. from gastro-intestinal diseases; 15 per cent. from respiratory diseases; 10 per cent. from epidemic diseases; 12 per cent. from all other causes.—M. Knowlton, *Pub. Health Rep.* **36**:2305, 1921.

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SATURDAY, FEBRUARY 4, 1922

ACTION OF MAGNESIUM SULPHATE ON THE GALLBLADDER

In 1917, Meltzer,[1] in connection with a study of the physiology of the neuromuscular reflexes of the alimentary tract, observed that when solutions of magnesium sulphate were applied directly to the duodenal mucosa, there was an apparent relaxation of the sphincter at the papilla of Vater; within a short time there was a contraction of the muscle bundles in the gallbladder wall, followed by a discharge of bile into the duodenum. This phenomenon was in keeping with his law of contrary innervation.

Lyon[2] used the method described by Meltzer as a means of diagnosis in diseases of the gallbladder, making a study of the amount, color, character, cytology and bacteriology of the bile expressed, and emphasized also the therapeutic value of the procedure. His five reasons for accepting the method were that: (1) the law of contrary innervation was correctly applicable to the biliary apparatus; (2) the color and viscosity of the bile obtained in the second aspiration (so-called "B" bile) strongly suggested that it came from its storage chamber within the gallbladder; (3) the "B" bile from diseased gallbladders is sometimes thick and tarry, containing mucopurulent flakes, pus cells and bacteria; (4) in cholecystectomized animals, "B" bile is not obtained by any of the aspirations; (5) in patients with gallbladder disease treated by this method, a marked improvement had been noted.

Recently Bassler, Luckett and Lutz[3] have studied the Meltzer-Lyon method, particularly in order to test the claims advanced by Lyon. Introducing magnesium sulphate with a tube into the duodenum, under direct observation, in patients undergoing operations on the biliary apparatus, there was no indication that the sulphate solution caused any sphincteric relaxation, gallbladder contraction, or even partial emptying of the gallbladder. They also found that the specific gravity of the bile was so elevated by the magnesium sulphate solution that any estimations as to its viscosity are of no value; the color change to the "B" bile was so irregular and ill defined that it could not be concluded that the "B" bile comes from the gallbladder. Furthermore, as is well known, in cases of biliary infection, bacteria and inflammatory cells are commonly encountered in bile from all parts of the tract. The assertion by Lyon that cholecystectomized animals do not have the darker, more viscous "B" bile was contradicted by the results of special new experiments on animals. The specific action on the papilla of Vater and the gallbladder claimed for solutions of magnesium sulphate is denied because solutions of various inorganic salts (sodium sulphate, sodium phosphate, magnesium citrate), 5 per cent. peptone, 0.5 per cent. hydrochloric acid, and food, all may stimulate a flow of bile when introduced into the duodenum; in fact, 0.5 per cent. hydrochloric acid caused a greater flow of bile than magnesium sulphate or the other solutions. They suggest that the deeper color of the "B" bile is due to oxidation and not to concentration in the gallbladder. Bassler and his co-workers also mention some recent experiments on dogs in which methylene blue was injected into the gallbladder; during digestion, which stimulates a flow of bile into the duodenum, there was no flow from the gallbladder, the bile evidently coming directly from the liver.

Dunn and Connell[4] report observations on a patient who had a hepatoduodenostomy, and in whom, the gallbladder and common bile duct being absent, a catheter was so placed that it led through a fistula into the duodenal recess into which the liver poured its secretions. Now, by introducing magnesium sulphate solution directly into the duodenum through the catheter, they obtained the typical "B" bile in the usual sequence. They conclude from this experiment that it is not necessarily true that the "B" bile represents gallbladder bile, or that it is possible to localize disease of the biliary tract on the evidence afforded by the Lyon-Meltzer method of bile segregation.

In contrast to these views, Smithies, Karshner and Oleson[5] have defended the Meltzer-Lyon method. In answer to the criticism that no gallbladder contraction is noted under direct observation at operation, they contend that contractions of the fine muscle bundles of the gallbladder could not be seen by the surgeons, and that one could not expect normal physiologic function in completely anesthetized persons. Their defense is based on experiences with the clinical application of the method.

An interesting phase in bile tract physiology is involved, and the question whether the gallbladder is

1. Meltzer, S. J.: The Disturbances of the Laws of Contrary Innervation as a Pathogenic Factor in the Diseases of the Bile Ducts and the Gall Bladder, Am. J. M. Sc. **153**: 469 (April) 1917.

2. Lyon, B. B. V.: Diagnosis and Treatment of Cholecystitis and Cholelithiasis by a Method of Physiological Drainage, Am. J. M. Sc. **160**: 515 (Oct.) 1920.

3. Bassler, Anthony; Luckett, W. H., and Lutz, J. R.: Some Experiments with the Meltzer-Lyon Method of Draining the Biliary System, Am. J. M. Sc. **162**: 674 (Nov.) 1921.

4. Dunn, A. D., and Connell, Karl: Report of a Case of Hepatoduodenostomy, J. A. M. A. **77**: 1093 (Oct. 1) 1921.

5. Smithies, Frank; Karshner, C. F., and Oleson, R. B.: Non-surgical Drainage of the Biliary Tract, J. A. M. A. **77**: 2036 (Dec. 24) 1921.

a storage chamber for bile to be used as needed or an apparatus for equalizing the pressure in the biliary tract comes to the front once more. If the specific action of magnesium sulphate on the flow of bile, as claimed by Meltzer, is denied and its action in stimulating the flow of bile is merely like that which takes place in digestion, it is evident that the claims advanced for the diagnostic and therapeutic value of the application of this salt to the duodenal mucosa must be modified, if not abandoned altogether.

PENETRATION OF THE TISSUES BY HEAT

When we put an icebag or a hot application on the skin, how deep does the temperature influence penetrate? Obviously, this will depend largely on the rapidity of the circulation of the blood in the part to equalize temperature changes, and the thickness of that great insulating material, fat tissue, underlying the application. Exact determinations of such an influence are difficult in the human subject, but in animals it is possible to bury thermocouples in the tissues and measure accurately the slightest temperature changes. Macleod and Taylor [1] have been conducting investigations of this sort, with results that are of interest to those who apply heat or cold to the patient's body.

It was shown that the application of heat to the surface of the thigh causes, in the rabbit, an immediate rise in temperature, which spreads laterally for about 20 mm. (three-fourths inch) and penetrates into the muscles for about the same distance, when the application is about 10 degrees C. (18 F.) hotter than the skin. On heat being applied to the surface of the abdomen, at a temperature difference of 15 C. (27 F.) and over a broader area (one fourth of the abdominal surface), temperature changes were observed to a depth of 75 mm. (3 inches), the lateral spread being 20 mm. (three-fourths inch). That the rise in temperature is mainly dependent on actual conduction of heat through the tissues, and not due to vasodilatation, is evidenced by the fact that the temperature attained in the tissues is considerably above that of the blood, which was recorded in all the experiments by placing a second thermocouple in some deep situation in the body some distance from the place of application of the heat. It is to be considered that the rabbit has usually less subcutaneous fat than the average human subject, and hence the distance of action will presumably be somewhat less in the latter.

The effect produced on the subcutaneous temperature by local cold is marked, and is immediately evident. In observations in which the applicator was at a temperature of from 21 to 23.5 C. (38 to 42 F.) below that of the muscle, there was a fall of from 3.9 to 4.7 C. (7 to 8.5 F.) at a depth of from 11 to 15 mm. ($\frac{7}{16}$ to $\frac{19}{32}$ inch) from the surface. The effects when heat or cold was applied over the important viscera were also investigated, and it was found that it is not possible to cause any significant change in temperature in the liver or kidneys by the local application to the surface of the body over either viscus of applicators that are about 10 or 12 C. (from 18 to 21.6 F.) warmer than the viscus. When the applicator is from 20 to 25 C. (36 to 45 F.) colder than the body, the fall of temperature is marked in the case of the liver, but usually is insignificant in the case of the kidney. When the applications were made to the head, however, it was found that much greater temperature changes were produced in the brain than in the liver or kidney, although less than in the muscle, presumably because the brain is less vascular than the liver and kidney. Application of even moderate degrees of heat—namely, 4.7 and 4.85 C. (8.46 and 8.73 F.) above body temperature—caused a rise of more than 0.5 degree C. (0.9 F.) at a distance of 17 mm. ($\frac{11}{16}$ inch) from the surface. With the applicator 7.4 C. (13 F.) warmer than the brain, the temperature in the latter rose through 1.5 C. (2.7 F.) at a depth of 13 mm. (one-half inch) and through 0.2 C. (0.36 F.) at 18 mm. ($\frac{23}{32}$ inch). The results following cold applications are comparable with those following heat, although often even more pronounced. When low temperatures were used, the fall in brain temperature became very marked indeed; thus, it fell through 3.3 and 3.45 C. (5.9 and 6.2 F.) at a depth of about 14 mm. ($\frac{19}{32}$ inch), when the applicator was at a temperature of about 25 C. (45 F.) below that of the body. These exact figures should be of much significance in therapeutics.

1. Macleod, J. J. R., and Taylor, N. B.: Lancet 2:70 (July 9) 1921.

ENDOGENOUS URIC ACID

Although uric acid metabolism has lost much of the popularity that it had a few years ago as a subject of discussion, the problems which it represents are still worthy of earnest consideration. As a physiologic end-product of certain chemical reactions in the body, uric acid should attain an importance subsidiary only to that of urea and creatinin, which in turn represent the final stages of still different transformations in the organism. Until the entire story of the chemical changes which result, respectively, in the output of urea, creatinin and uric acid is known, no adequate picture of nitrogenous metabolism can be produced. That these catabolic end-products circulate in the blood ready for elimination by the kidneys is now clearly established; that the renal excretory apparatus sometimes functions so imperfectly as to cause an undue retention of these nitrogenous catabolites is also well known; but precisely how and where they arise from their precursors is still largely a matter for speculation.

A considerable portion of the uric acid excreted in the urine from day to day under ordinary conditions of diet by a healthy person undoubtedly has its origin in purin compounds existing preformed or potentially

in nucleic acids of the food. Man eats purins which, if absorbed, are eliminated as uric acid. But even when the diet is purin free, as occurs during a regimen consisting of milk and its products, eggs, cereals and many vegetables, or even during a period of fasting, the blood still shows a content of uric acid which finds its way into the urine.

Thus there is a continuous so-called endogenous production of uric acid, regarding which much speculation has been recorded. The output under these conditions is not constant but varies considerably, especially when the food intake is largely varied and even though the latter may have no immediate precursors of uric acid in the form of purin-yielding products.[1] The oldest and most widely quoted theory was formulated by Mares,[2] who attributed the increase in output of uric acid following the consumption of purin-free food to nuclear disintegration, chiefly in the alimentary glands, incidental to the physiologic work of secretion and digestion. Uric acid thus represents, according to Mares, the wear and tear of these glandular tissues. On this hypothesis, when the alimentary glands are resting, the output of uric acid is low; when they are actively synthesizing and secreting digestive fluids, wear and tear is increased, and the production of uric acid is accelerated.

In this country, Mendel and Stehle [3] championed the view that a portion, at least, of the endogenous uric acid may originate from the activity of the alimentary secretory apparatus. Other investigators have debated this conclusion. The latest studies by Rose [4] and his collaborators at the University of Texas lend further support to the view that invariably the consumption of food leads to an increase in the excretion of uric acid. They emphasize the belief already expressed for proteins by Lewis, Dunn and Doisy [5] that one factor in the extra production of uric acid following food ingestion is the general stimulation of cellular metabolism produced by some of the digestion products. When more protein is ingested, the amino-acids that arise are the stimulating agents, and in some instances may actually be direct precursors of uric acid. Under conditions of constant diet and nitrogen equilibrium, the Texas biochemist tells us, purin metabolism, as measured by the uric acid output, proceeds at a fairly constant rate; but this rate may be altered by changes in the character or quantity of food ingested. Amino-acids, and probably digestive (or metabolic) products of carbohydrates and fats, exert a general stimulating action on cellular catabolism, which is manifested by a rise in uric acid elimination following marked increases in food consumption. Moreover, indirect evidence indicates that perhaps in the case of the animo-acids, they themselves, rather than their nitrogen-free derivatives, are the stimulating agents. Such conceptions throw new light on the origin of a waste substance, often troublesome in the progress of its elimination, which most physicians have come to associate almost entirely with the purins of the diet. The latter are indisputably important as uric acid precursors, but they are evidently not the sole factors that enter into the genesis of uric acid.

1. A comprehensive review of the subject is given by Rose, W. C.: The Influence of Food Ingestion upon Endogenous Purine Metabolism, I, J. Biol. Chem. 48: 563 (Oct.) 1921.
2. Mares, F.: Arch. slav. biol. 3: 207, 1887; Arch. f. d. ges. Physiol. 134: 59, 1910.
3. Mendel, L. B., and Stehle, R. L.: J. Biol. Chem. 22: 215, 1915.
4. Rose, W. C.: The Influence of Food Ingestion upon Endogenous Purine Metabolism, II, J. Biol. Chem. 48: 575 (Oct.) 1921.
5. Lewis, H. B.; Dunn, M. S., and Doisy, E. A.: J. Biol. Chem. 36: 9 (Oct.) 1918.

THE ORIGIN OF "VITAMIN A"

Although information regarding the distribution of those potencies of naturally occurring foods now commonly designated as vitamins is rapidly being accumulated,[1] their origin in nature is by no means understood. Investigators are at present agreed that animals in general are dependent on the plant kingdom for all of the recognized groups of vitamins. In other words, these essential factors in the nutrition of man apparently cannot be synthesized de novo in the animal cells or tissues. The food products of animal origin, such as milk and eggs, are indeed among the well recognized natural sources of vitamins. Various animal fats are carriers of vitamin A. What science attempts to assure us at present, however, is that all of these potencies have in ultimate analysis been derived from plant sources by either man or the animal. How, then, do they arise in the plant?

Seeds in general are deficient in vitamin A, the so-called fat-soluble food accessory factor. On the other hand, this is known to be relatively abundant in the green, actively assimilating parts of plant tissues. Perhaps the widespread use of green leaves of various sorts as salads in the diet finds a partial explanation in this fact. Coward and Drummond [2] of University College, London, have attempted to trace the origin of the vitamin A in these cases. According to them there is no increase in this factor when seeds are germinated, nor is there any gain when the latter are etiolated in the dark. Etiolated seedlings and pale colored leaves deficient in chlorophyl apparently do not synthesize vitamin A; on the other hand, green leaves form it in larger amounts. Lower plants, such as marine algae containing chlorophyl, synthesize this dietary factor; others, such as weeds which are differently adapted for photosynthesis, are not so active in this respect; while mushrooms, devoid of pigments which are concerned with carbon assimilation, are almost completely deficient. The vitamin A in green leaves does not appear to be associated with proteins. It may be extracted in the fat removed by solvents, and appears in that fraction of the fat which is resistant to saponi-

1. Eddy, W. H.: The Vitamine Manual, Baltimore, Williams and Wilkins Company, 1921.
2. Coward, K. H., and Drummond, J. C.: The Formation of Vitamin A in Living Plant Tissues, Biochem. J. 15: 530, 1921.

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fication. This is in accord with the latest findings of Steenbock, Nelson and Hart [3] at the University of Wisconsin, who have ascertained that saponified cod liver oil still retains its vitamin potency.

The foregoing considerations on the appearance of vitamin A in the growing plant only at certain stages of its development makes it easier to understand why the diet of the cow is undoubtedly the chief cause of variations in the amount of vitamin A in milk. There is no appreciable variation in the vitamin A content of milk at different seasons of the year, apart from that associated with the different character of the diet ordinarily consumed at those seasons.[4] This confirms what has already been discovered in regard to the variations in the antiscorbutic potency of cow's milk. A few years ago, discussion in regard to milk revolved largely about the question of the breeds of cattle; today the problem of feed is coming into ascendency in some respects.

Current Comment

MEDICAL HISTORY OF THE WORLD WAR

The first volume of the Medical History of the World War has now appeared: it is designated Volume XV—Statistics. We are informed that other volumes will be issued from time to time in such order as they become available. The present volume is devoted to army anthropology. As is generally known, the size of men has a relation to their ability to carry equipment, to the amount of food required, and to their ability to make long marches; finally, it is a means of identification. In this volume the physical measurements of our troops are compiled and analyzed. It is impossible to review or even to summarize all of the material presented. Many interesting facts become apparent. The mean weight of the first million recruits was 141.54 pounds, whereas at demobilization the average weight was 3 pounds more. The Scotch are the most variable in weight, the Poles the least. The mean circumference of the deflated chest of the first million recruits was 33.22 inches. Recruits from the Northwestern states showed the greatest circumference of chest. The average man wears a 14¾ or a 15 collar. Only 9 per cent. of the men from Florida had blue eyes, whereas in Wisconsin 54 per cent. had blue eyes, showing clearly the influence of the Nordic element. For the United States as a whole, the percentage of blue eyes dropped from 45 per cent. during the Civil War to 28 per cent. at present. Oregon had 28 per cent. blonds; Montana, 23; Utah, 14, and Minnesota and South Dakota, 10 per cent. each. The Gulf states showed less than 1 per cent. of blonds. There is, moreover, a tremendous amount of data as to the relation of various body dimensions to disease and as to the distribution by states of various physical characteristics. As a source book for those interested along these lines, the book is well nigh indispensable. The editors of our Medical History of the World War are to be congratulated on this excellent sample of what will apparently be a great achievement.

3. Steenbock, H.; Nelson, E. M., and Hart, E. B.: Fat-Soluble Vitamine, IX, The Incidence of an Ophthalmic Reaction in Dogs Fed a Fat Soluble Vitamine Deficient Diet, Am. J. Physiol. **58**: 14 (Nov.) 1921.

4. Drummond, J. C.; Coward, K. H., and Watson, A. F.: Researches on Vitamin A, VII, Notes on the Factors Influencing the Value of Milk and Butter as Sources of Vitamin A, Biochem. J. **15**: 340, 1921.

THE CAPILLARIES IN SCURVY

The study of scurvy has attained an unexpected prominence since 1907, when Holst and Frölich demonstrated that the chief characteristics of the disease in man can be duplicated experimentally in the guinea-pig by feeding diets deficient in certain nutritive properties now designated as vitamin C. The close analogy or identity between the most prominent symptoms exhibited by the two species is now generally admitted; consequently there is some justification for assuming also a similarity in the pathogenesis of scurvy in man and in the guinea-pig. For the latter, Findlay [1] of the Royal College of Physicians' Laboratory, Edinburgh, has recently demonstrated that in the absence of vitamin C from the diet there occurs, as Bierich [2] earlier suggested, an interference with the nutrition of the capillary endothelium. This is the essential lesion on which the more striking pathologic manifestations are dependent. Owing to degenerative changes in these cells of the vascular system they become swollen, with the result that the passage of the blood corpuscles is delayed. Findlay assumes that the congestion gives rise to increased transudation of fluid through the capillary wall, and finally, as the intercellular substance gradually wears out, to the passage of red corpuscles into the surrounding tissues. Thus the occurrence of the conspicuous hemorrhages is merely incidental to more profound defects. Stagnation of blood in the capillaries in itself leads to imperfect oxygenation and nutritional conditions that ultimately express themselves in severe disorders.

THE ANNUAL CONFERENCE ON MEDICAL EDUCATION, HOSPITALS AND PUBLIC HEALTH

An important factor in bringing about improvements in medical education has been the annual conference held under the auspices of the Council on Medical Education each year since 1904. These conferences have provided a forum in which presidents of universities, officers and members of licensing boards and others interested could discuss the reports in regard to conditions in medical schools, proposed standards of preliminary and medical education, revision in the medical curriculum, etc. In the eighteen years since these conferences began, entrance requirements have been increased, stock corporation medical schools have practically disappeared, medical schools generally have been reorganized, and for a score or more of the institutions entirely new plants have been constructed. Although the ideals set forth at the beginning of the campaign have been more than realized, there is still great need that the conferences be continued. As the

1. Findlay, G. M.: The Blood and Blood Vessels in Guinea-Pig Scurvy, J. Path. & Bacteriol. **24**: 446 (Oct.) 1921.

2. Bierich: Deutsch. Arch. f. klin. Med. **130**: 151, 1919.

reorganization of medical schools has progressed new problems have arisen, such as the increased cost of furnishing a medical education, necessary limitation of enrolments, the difficulties of medical practice in rural communities, the unfortunate haste of recent graduates to specialize in their practice, and the need of more public health education. All these matters can be best worked out at these annual conferences. The conference to be held March 6-10[1] will perhaps render even greater service than previous conferences because of the wider scope of the subjects under discussion. It will deal with problems not only of medical education and licensure but also of hospitals and public health.

INFLUENZA

Reports indicate that there is a somewhat increased incidence of influenza, particularly in New York. Special mention of increased incidence is also made in correspondence from London and Berlin. The history of influenza indicates that recrudescence is to be expected from time to time in various localities following the initial pandemic. The pandemic waves come at irregular intervals of a generation or two and are followed by years of epidemic and sporadic prevalence, the secondary waves occurring at intervals of eight months following the pandemic and the entire cycle lasting about four to six years. The experience of the past indicates, furthermore, that the cases in such recrudescences are less numerous and less severe than in the primary pandemic.

Association News

ST. LOUIS SESSION

Special Railroad Fares

The Southwestern Passenger Association announces that there will be available for members of the American Medical Association who go to St. Louis for the Annual Session a special rate of one and one-half fares for the round trip, going and returning the same route. To secure this rate, purchasers are required to present an identification certificate. These certificates will be available within a short time. One certificate will enable the member to purchase tickets for himself and for dependent members of his family. Tickets will be sold on the presentation of these certificates from May 16 to 24 inclusive. They must be validated at St. Louis during the days of the session, and the return trip must be completed by June 1, 1922. The minimum excursion fare on presentation of this identification certificate is $1. Members and Fellows may secure these certificates by writing the secretary of the Association, Dr. Alexander R. Craig, 535 North Dearborn Street, enclosing a self-addressed, stamped envelop.

The Central Passenger Association, the Trunk Line Association, the Southeastern Passenger Association and the Western Passenger Association have also authorized similar special fare tickets from points in their territories.

Hotel Reservations

The hotels designated by the Local Committee of Arrangements as headquarters for the several sections were announced in THE JOURNAL, Dec. 3, 1921, page 1824. The Local Committee of Arrangements reports that inquiries are being received and that reservations have been recorded daily since that time. The St. Louis hotels and the Convention Bureau are cooperating with the Local Committee of Arrangements in a satisfactory and helpful manner that assures comfortable accommodations to those attending the Annual Session. The Local Committee of Arrangements, however, requests that, whenever possible, arrangements shall be made for doubling up so that every one who goes to St. Louis may be assigned to comfortable lodgings. Reservations should be made by communicating directly with the hotel at which the member desires to stop. If satisfactory arrangements cannot be made in this way, write to the chairman of the Local Committee on Hotels, Dr. Louis H. Behrens, 3525 Pine Street, St. Louis.

1. See tentative program, General News, J. A. M. A. 78:203 (Jan. 21) 1922.

REFUTATION OF UNWARRANTED CHARGES OF FAVORITISM

The *Journal of the Indiana State Medical Association*, January, 1922, publishes an editorial note which reads:

"A year ago we had occasion to call attention to the fact that some of the A. M. A. officers reserve all of the available rooms at the leading hotels in the city where the annual session of the A. M. A. is to be held, and then parcel out the rooms to their personal friends. As a matter of fact, this is a species of discrimination and unfairness that should be prohibited at future sessions of the A. M. A. The rule 'first come, first served' should prevail, and while the A. M. A. officers may succeed in getting the cream of the hotel reservations, they should not prevent others from having at least a fair show of getting the accommodations desired. We appreciate the fact that there are other hotels in St. Louis where if one 'stands in' with the Chairman of the Hotel Committee, reservations for the St. Louis session may be made, but it is the principle of the thing which arouses our ire. The A. M. A. is a large democratic organization, and it is not supposed to be run in the interest of a few."

The editorial note quoted above is inexcusable because it is contrary to facts that must have been in the possession of the editor of the *Journal of the Indiana State Medical Association* before the number which carries the editorial note was issued. Five letters, three from Dr. Bulson and two from myself, have passed between us with regard to this matter. Dr. Bulson has no warrant for the statement, and he must know that it is untrue, that officers of the American Medical Association "parcel out the rooms to their personal friends." The facts are: During the time that I have been officially connected with the Association, since 1911, tentative reservations have been made each year at one of the hotels in the city in which the next annual session is to be held for the officers of the Association, the members of the Board of Trustees, and the members of the several Councils—the Judicial Council, the Council on Health and Public Instruction, the Council on Medical Education and Hospitals, and more recently for the Council on Scientific Assembly. This procedure was established long before 1911. Such arrangement is necessary in order that the Association may carry on its work at its annual sessions. These reservations have never exceeded fifty rooms; usually fewer have been reserved.

It will be recalled that at the Boston Session of the House of Delegates, it was moved and carried "that the Secretary of the Association reserve for next year a sufficient number of rooms and announce in THE JOURNAL that these rooms will be held until ten days before the meeting so that the delegates may secure their reservations through the Secretary. Seconded and carried." This action of the House of Delegates is mandatory, and in compliance therewith, I, as Secretary, made a tentative reservation of rooms for the use of members of the House of Delegates. Even with this additional number of reservations, this year as on previous occasions, great care has been taken to avoid taxing the advertised capacity of any one of the hotels at the place of annual session. To repeat, all these facts were mailed to Dr. Bulson, January 12; the issue of the Indiana journal quoted was received in this office on January 30.

Moreover, the gratuitous suggestion that the chairman of the local Committee of Hotels serves only those who "stand in" with him is an unwarranted insult to the St. Louis physician who, as chairman of that committee, is serving the Fellows of the Association freely and willingly.

ALEXANDER R. CRAIG, Secretary,
American Medical Association.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ALABAMA

Negro Health Week.—The national negro health week will be held, April 2-8, at Tuskegee, under the auspices of the Tuskegee negro conference and the National Negro Business League, in cooperation with the U. S. Public Health Service and other similar agencies.

ALASKA

Personal.—Dr. Floyd B. Gillespie, Kennecott, has been appointed a member of the Alaska territorial board of medical examiners, for the third division.

ARIZONA

Maricopa County Health Center.—The Maricopa County Anti-Tuberculosis Society and the Free Clinic were recently amalgamated into one organization under the name of the Maricopa County Health Center. Dr. Warner Watkins was elected vice president.

County Medical Meeting.—The El Paso County Medical Society held its annual meeting, December 19, at Juarez. Dr. Walter E. Dandy, Baltimore, gave an address on "Diagnosis of Brain Tumors." The following officers were elected for the ensuing year: Dr. Robert B. Homan, president; Dr. Thomas J. McCamant, vice president; Dr. Edward W. Rheinheimer, secretary-treasurer, and Dr. Paul Gallagher, associate editor of *Southwestern Medicine*.

Hospital News.—The old Arizona Hospital has recently been reorganized under the name of the Arizona Hospital and Sanatorium, Tucson.——A home for the resident physician has just been completed at St. Luke's-in-the-Desert Sanitarium, Tucson. Other improvements are also being made.——A new wing to house the operating rooms and the chapel is being constructed at St. Joseph's Hospital, Phoenix.

CALIFORNIA

Hospital News.—The new Vallejo General Hospital, constructed at a cost of approximately $150,000, will be formally opened, March 15.

Personal.—Dr. Thomas E. Shumate, San Francisco, has been reappointed police commissioner.——Col. Guy L. Edie, M. C., U. S. Army, San Francisco, retired from active service, January 18.

COLORADO

Personal.—Dr. Edwin L. Apperson, Denver, has been appointed local consul of the republic of Panama.

El Paso County Medical Society.—At the annual meeting of the society, held recently at Colorado Springs, the following officers were elected for the year 1922: president, Dr. Elmer L. Timmons; vice president, Dr. Joseph J. Mahoney; treasurer, Dr. Omer R. Gillett, and secretary, Dr. Claude E. Richmond.

Medical Society Meeting.—At the annual meeting of the Medical Society of the City and County of Denver, held recently, the following officers were elected for the ensuing year: Dr. Philip Hillkowitz, president; Dr. Austin G. Case, vice president; Dr. Casper F. Hegner, secretary, and Dr. Clinton G. Hickey, treasurer.

DISTRICT OF COLUMBIA

New Casualty Hospital Proposed.—A bill providing for the construction of a new casualty hospital for the District of Columbia at a cost of $150,000 has been introduced in the House by Representative B. F. Focht, chairman of the House Committee on the District of Columbia.

Street Through Walter Reed Hospital.—A measure providing for the extension of a street through the Walter Reed General Hospital in Washington has passed the Senate. The bill was urged by Surg. Gen. M. H. Ireland of the Medical Department of the Army. There was some difference of opinion in the Senate over the desirability of having a public highway passing through the center of the army hospital property, but it was finally voted on favorably.

GEORGIA

Personal.—Dr. Henry Lonzoe Akridge, Sale City, has been appointed county health officer.——Dr. Charles L. Ridley, Hillsboro, has been elected health officer of Macon.

Medical Meeting.—The annual meeting of the Georgia Medical Society of Savannah, was held in Savannah, December 13. The following officers were elected for the ensuing years: president, Dr. Harry Y. Righton; vice president, Dr. Herman W. Hesse, and secretary-treasurer, Dr. E. C. Demmond.

IDAHO

Personal.—Dr. Hyrum A. Anderson, Rigby, has been appointed county physician to succeed Dr. Oel F. Call, who resigned recently.

Hospital News.—The U. S. Public Health Hospital Service, Washington, D. C., has authorized the expenditure of $50,000 to build a unit to the United States Hospital, Boise Barracks.——The Clearwater Hotel, Orofino, has been purchased and remodeled into a hospital.

ILLINOIS

Meeting to Draft Milk Ordinance.—A joint conference between representatives of the state departments of public health and agriculture and the University of Illinois was held in Springfield, February 3, for the purpose of drafting a model milk ordinance to fit conditions as they exist in the various municipalities of the state.

Physicians Fined for Not Reporting Births.—It is reported that in connection with the birth registration campaign recently launched by the state department of public health, Dr. Frank A. Olms, Hampshire, and Dr. Ernest N. Scott, Hinsdale, were tried and fined in the local courts for repeated delinquencies in reporting births. The director of public health announces that state's attorneys are working in other districts in a number of cases, and new prosecutions will probably follow.

Morgan Sanatorium to Open.—Money has been raised from private sources to purchase equipment and employ the necessary personnel for opening the Morgan County Tuberculosis Sanatorium, which has stood idle since its purchase because of lack of public funds for operation. It is reported that a physician has already been appointed to direct the institution, and that arrangements have been made to accept patients from other counties at a stated rate per week. Tuberculous patients from Morgan County will receive free treatment.

Laboratory Reports to Be Submitted to Local Authorities.—In order to assist local authorities in checking up on epidemics and in establishing and terminating quarantine, the diagnostic laboratories of the state department of public health have made arrangements to submit to the local health officer, or the person acting in that capacity, a copy of all laboratory reports on specimens examined in connection with diphtheria, typhoid and paratyphoid fevers, dysentery, malaria, rabies, meningitis, hookworm or other intestinal parasites, septic sore throat, anthrax, glanders and leprosy.

Personal.—Dr. Henry P. Beirne, Quincy, has been appointed a member of the state board of medical examiners of Illinois.——Dr. Charles E. Trovillion, Metropolis, has been appointed managing officer of the Alton State Hospital for the Insane, Alton.——Dr. Frederick S. Salisbury, medical staff, Watertown State Hospital, East Moline, has been appointed assistant surgeon at the U. S. Public Health Service Hospital, Waukesha, Wis.——Dr. Elizabeth B. Ball, Quincy, for many years secretary of the Adams County Medical Society, has recently accepted the position of assistant pediatrician in the division of child hygiene and public health nursing of the state department of public health.

Chicago

Appropriation to Combat Smallpox.—The Chicago City Council Finance Committee, January 6, voted $20,000 for the use of the health department in combating smallpox.

Building for Physicians.—It has been announced that plans have been drawn for the construction of an eleven story apartment building for physicians, at a cost of $450,000, to be finished about October. The building will contain only ten apartments, and will be owned by four physicians.

INDIANA

Personal.—Dr. Amos L. Wilson, Indianapolis, was severely injured, January 8, when the automobile in which he was riding collided with another car and overturned.——The office

of Dr. John I. Rinne, Lapel, was looted, January 10, by a drug addict, who first telephoned the physician's office to ask him to attend a patient 5 miles away.

IOWA

Hospital News.—At the Independence State Hospital, a separate building for tuberculous cases is under construction with a capacity for fifty patients.——A hospital for advanced cases of tuberculosis is now being erected at Oakdale, with a capacity of sixty patients. An appropriation of $140,000 is available for another building at this place after next July.——An appropriation has been made, available July 1, for a home for forty employees now living at the State Hospital for Epileptics, Woodward, and also to make room to accommodate 100 more patients.——A new tuberculosis building for women will be constructed at the Clarinda State Hospital.

KANSAS

Laboratory Workers to Meet.—The state director of health directed all the medical laboratory workers of the state to meet at Topeka, January 27, with the object of establishing standardized methods in all the laboratories of the state.

KENTUCKY

Central Kentucky Conference on Social Hygiene.—A conference will be held, February 24-25, at Lexington, under the auspices of the department of hygiene and public health at the University of Kentucky, in the interests of education and parents. Speakers for the U. S. Public Health Service, the U. S. Bureau of Education, the American Social Hygiene Association and the Kentucky State Board of Health will be on the program.

Health Exposition.—A Health Exposition is being held, February 1-9, at Louisville, under the auspices of the U. S. Public Health Service, State Board of Health of Kentucky, Jefferson County Board of Health and the Health Department of the City of Louisville. It includes exhibits in hospitalization, nursing, dentistry, medicine and pharmacy. The annual convention of the Kentucky State Public Health Association and the annual conference of the city and county health officers are being held at the same time. Dr. Milton J. Rosenau, Dr. Josephine Baker, Dr. William A. Evans, Dr. Frederick R. Green, Dr. Valeria H. Parker, Dr. John Stokes, Dr. Watson S. Rankin and Dr. John Dill Robertson are among the visiting physicians on the program of the Public Health Institute.

LOUISIANA

Physicians' Occupational Tax.—It is reported that a number of physicians of New Orleans have asserted, that if the legislature at its May meeting refuses to repeal the physicians' occupational tax, they will strike to enforce, through the courts, the payment of money alleged to be due on licenses. The occupational tax has been denounced by the board of governors of the Louisiana State Medical Society.

MARYLAND

Personal.—Dr. William B. Dalton, Baltimore, has been appointed superintendent of the South Baltimore General Hospital, to succeed Dr. Robert W. Johnson, who resigned recently.——Edwin O. Jordan, professor of bacteriology, University of Chicago, lectured at the School of Hygiene and Public Health, Johns Hopkins University, on "Interepidemic Influenza," January 30. His lecture is one of the series of the DeLamar lectures on hygiene given at the university.——Dr. Hugh H. Young has sailed from New York on the *Caronia* for the Mediterranean. He will be abroad about two months.——Drs. Samuel J. Crowe and John I. Baylor of the Johns Hopkins Hospital will sail, February 1, for Europe. While abroad, they will visit most of the important hospitals of Europe, where studies of surgical methods in foreign countries will be made. They will return to Baltimore about April 1.

MASSACHUSETTS

Hospital News.—Contracts have been awarded for an addition to the Boston City Hospital at a cost of $493,000. This addition will increase the outpatient department capacity from 500 to 1,000.

New Title for Medical Journal.—It has been announced by the *Journal of Orthopedic Surgery*, Boston, that the name has been changed to the *Journal of Bone and Joint Surgery*, and that it will be published quarterly, beginning with the January issue.

Resignations from Medical School of Harvard University.—Dr. Harold C. Ernst, professor of bacteriology, has resigned, his resignation to take effect at the end of the academic year. Dr. Ernst has been professor of bacteriology since 1895.——Dr. William T. Councilman, professor of pathology since 1892, has resigned, his resignation to become effective at the end of the academic year.

Boston Medical Library.—At the annual meeting of the Boston Medical Library, held January 10, the following officers were elected: president, Dr. George H. Monks; vice presidents, Drs. William N. Bullard, Homer Gage and Henry Jackson; secretary, Dr. Walter L. Burrage, and treasurer, Dr. Richard G. Wadsworth. There are 110,827 books and 69,796 pamphlets in the library.

New England Pediatric Society.—The seventy-second meeting of the society will be held, February 10, at the Boston Medical Library, under the presidency of Dr. Richard M. Smith. Dr. Edwards A. Park, New Haven, Conn., will give an address entitled "Is There More Than One Kind of Rickets?" and Dr. Lawrence W. Smith, Boston, will read a paper on "The Experimental Feeding of a Vitamin-Deficient Diet, with Especial Reference to Scurvy."

Proposed Law Governing Motor Vehicles.—On January 10 a law proposing to require general liability insurance of all owners of motor vehicles was introduced into the legislature of the state of Massachusetts. The law specifies conditions under which injury must occur in order that indemnity be paid and specifies the amounts of indemnity for injuries of various types. The premiums to be charged by insurance companies are subject to the approval of the insurance commissioner.

Committee on Rural Health and Medical Service.—The committee held a meeting, January 9, in Boston. The present weakness of purely medical organizations was discussed and the consequent difficulty in meeting so large and complex a problem as that of adequately extending medical service to the many neglected rural districts. It was voted that the committee continue with the object of educating the laity as to the importance of improvement of medical service in rural districts until such time as the Massachusetts Medical Society is prepared to undertake the improvement of this service.

MICHIGAN

Physicians Convicted.—It is reported that Drs. Charles M. George and Charles J. Beaver, both of Detroit, have been convicted of performing illegal operations.

Convictions.—Joseph Barris, an advertising doctor of Detroit, was convicted in December and sentenced to six months in the house of correction.——John Serban Capotescu, Detroit, registered as a "drugless practitioner," was convicted, November 1, of practicing medicine without a license.

Death Rate from Automobile Accidents.—It has been announced by the Michigan state board of health that 397 persons were killed in the state in 1921, the same number that were killed the preceding year. Of the total killed, 129, practically one third, were children under 16 years of age, 281 boys and 116 girls. Detroit reported 131 deaths, Grand Rapids 15, and the Upper Peninsula 23.

Department of Health Adds to Reprint Series.—The Michigan Department of Health, Lansing, announces the publication of three numbers of its reprint series which may be obtained upon request. The series includes: "Comparative Studies of Diphtheria Cultures of Loeffler's Medium with the Original Swabs Transported by Mail," by C. C. Young and Minna Crooks; "The Wassermann Test and Its Interpretation," by R. L. Kahn, and "The Review of the Hillsdale, Mich., Typhoid Fever Epidemic of 1920," by R. M. Olin.

MISSOURI

Personal.—Dr. Stephen V. Bedford, Jefferson City, was elected president of the Cole County Medical Society, at the annual meeting, held recently.

Medical Society Adopts Resolution Endorsing Bill.—The St. Louis Medical Society, at its regular meeting, unanimously adopted a resolution endorsing the Watson-Dyer bill providing for the reorganization of the U. S. Public Health Service.

New Officers for State Board of Health.—At a meeting held recently in Jefferson City the following officers were

elected: Dr. Rudolph S. Vitt, St. Louis, president, to succeed Dr. Emmet North; vice president, Dr. Ethan E. Brunner, Farmington, and secretary, Dr. Cortez F. Enloe, Jefferson City.

NEBRASKA

State Medical Meeting.—The next annual meeting of the Nebraska State Medical Association will be held, April 24-27, at Omaha.

Hospital News.—The contract has been awarded for the erection of a new hospital at the Soldiers' Home, Grand Island, at a cost of $125,000.——The construction of an addition to accommodate 100 patients, to St. Catherine's Hospital, Omaha, is contemplated.

NEW HAMPSHIRE

Centennial of Medical Society.—The one hundredth annual session of the Center District and Merrimack County Medical Society was held, January 17, at Concord, under the presidency of Dr. Nathan L. Griffin, New London. Dr. James B. Woodman, Franklin, was elected president for 1922.

NEW JERSEY

Hospital News.—A new hospital, to be known as the Physicians and Surgeons Hospital of West Hoboken, has been established at North Hudson.

Physician's License Revoked.—December 22, the board of medical examiners found Hannah E. Whitehead guilty of having practiced criminal abortion, and revoked her license to practice medicine and surgery in the state.

Unlicensed Practitioners Convicted and Fined.—A report from the state board of medical examiners states that Louis Adler of Newark and Guiseppe D'Amico of Jersey City were recently convicted of practicing medicine without licenses and were fined $200 each.

NEW MEXICO

Personal.—Dr. Frank E. Tull, Albuquerque, secretary of the New Mexico Medical Society, has removed to Los Angeles. Dr. John W. Elder will assume his duties until the annual state meeting in April, at Gallup.

NEW YORK

Hospital News.—The Hudson City Hospital has been completed, and was formally opened, December 30.

Hospital Bill Advanced.—The measure designed to provide that the state hospital for the treatment of discharged soldiers suffering from mental disease shall be open to the care and treatment of all persons and shall be known as the Brooklyn State Hospital, Creedmoore Division, has been advanced to the order of final passage in the Assembly.

Medical Meeting.—At the annual meeting of the Medical Association of the Greater City of New York, held, January 16, the following officers were elected for 1922: president, Dr. George L. Brodhead, recording secretary, Dr. E. E. Smith, chairman for the borough of Brooklyn, Dr. Robert E. Coughlin, and chairman for the borough of Richmond, Dr. William Bryan.

Personal.—Dr. Frederick C. Sabin, Little Falls, has been appointed city physician to succeed Dr. Karl A. Blum, who resigned recently owing to ill health.——Dr. Walter G. Frey, Astoria, has been elected chairman of the medical board of St. John's Hospital, Brooklyn.——Dr. Agha B. Musa, Webster, who has been engaged in relief work in Russia, is reported ill with typhus fever at Orenburg, Russia.——Dr. Florence L. McKay, recently assistant director, Division of Child Hygiene, Children's Bureau, Department of Labor, has been appointed director of the Division of Child Hygiene, New York State Department of Health.

New Drug Control Bill.—A bill has been introduced into the assembly which aims to control the sale, prescribing and dispensing of drugs in New York City. It is similar to the former Whitney bill, except that no department of narcotic drug control is created. Under the new measure, physicians prescribing the drug would be required to issue prescriptions in duplicate, which an apothecary could fill only on receiving, and the apothecary would be required to file one of the prescriptions, in the cities of the first class, with local boards of health, and in other parts of the state with the state department of health. Possession of a hypodermic syringe or a substitute is forbidden. The measure carries an appropriation of $10,000.

New York City

Annex for Roosevelt Hospital.—Roosevelt Hospital is to have an eight-story addition to its building at Ninth Avenue and Fifty-Ninth Street. The estimated cost of the new structure is $1,000,000.

Bronx Hospital for Veterans.—Plans for remodeling the Bronx Hospital for the treatment of ex-service men have been approved by the Treasury Department. It is hoped to have the hospital ready for occupancy by March 15. There will be 1,800 beds, and the remodeling will cost approximately $700,000. The hospital will be for the treatment of general diseases.

Influenza and Pneumonia Mildly Epidemic.—According to the figures of the health department made public, January 27, the number of cases of influenza reported on that day was 203, as compared with 366 on the preceding day. Health Commissioner Copeland has issued a statement announcing that the city is experiencing a mild epidemic of pneumonia rather than influenza.

NORTH CAROLINA

New Plan for County Health Service.—The Guilford County Medical Society has inaugurated a plan to provide physical examination for every citizen in the county. Each physician in the county has agreed to serve at any time for as long a period as may be required. The command to come from a "steering committee" composed of Drs. John T. J. Battle and William M. Jones, Greensboro, and Dr. William J. McAnnally, High Point. The plan includes the physical examination of every inhabitant of the county and free clinics for all the rural districts and health lectures in schools and churches.

OHIO

Personal.—The staff physicians of the Salem City Hospital, January 10, presented a gold watch to Dr. Rollin M. Schwartz, city and county health commissioner, in appreciation of his services to the community. Dr. Schwartz has resigned as county health commissioner to become health commissioner of Santa Fe County, N. M. His successor has not yet been chosen.——Dr. James B. Gruber, Guilford, and Dr. Frederick W. Dixon, Leetonia, have been elected members of the district board of health of Colombiana.

Gift to University.—It is announced by the secretary of the faculty of the Western Reserve University School of Medicine, Cleveland, that in addition to previous gifts to the building fund totaling $800,000, Mr. Samuel Mather, Cleveland, will provide funds for the erection of the new building of the school of medicine. The estimated cost of the building is $2,529,700. Plans and specifications are complete, and construction will begin in the near future. Following the completion of the medical school, construction will begin on the Children's Hospital, the Maternity Hospital and the Lakeside Hospital, all of which are affiliated with the school of medicine, and will be situated on the university campus.

OKLAHOMA

Smallpox Quarantine.—The state health officer issued orders, January 9, to quarantine all counties in eastern Oklahoma, bordering on Arkansas, owing to the smallpox situation. Persons leaving trains were quarantined unless able to produce a certificate of recent vaccination.

OREGON

Personal.—Dr. Paul J. Peniston, Portland, who has been in charge of the city bacteriologic laboratory for two years, has resigned and will locate in Hawaii.——Dr. Herbert M. Manning, Biltmore, N. C., has been appointed to take charge of the quarantine station and public health station at Astoria, to succeed Dr. Jay Tuttle.

Sterilizing Law Before High Court.—The Oregon state board of health has ordered an immediate appeal to the state supreme court to decide the constitutionality of the state sterilization law as a result of a decision by two Marion County circuit judges that the law was unconstitutional, declaring that methods of legal procedure are not sufficiently defined in the sterilization statute.

PENNSYLVANIA

Western Pennsylvania Association of Medical Officers.—The annual dinner of the Western Pennsylvania Association of Medical Officers of the World War was held in Pittsburgh, December 10.

State Hospital Association.—At the meeting of this association held, December 7, at Harrisburg, Dr. Daniel D. Test, superintendent of the Pennsylvania Hospital, Philadelphia, was elected president, and Dr. John A. Drew, Chester, was elected a member of the association.

Personal.—Dr. Isadore J. Weida, Emaus, has been elected president of the Lehigh Medical Society.——Dr. Edward Plank was elected president, and Dr. Calvin R. Rickenbaugh, physician, of the Carlisle borough board of health at the meeting held, January 10.——Dr. Harry H. Penrod, Johnstown, was elected president of the Cambria County Medical Society, January 12.

Tuberculosis Society Meeting.—The annual meeting and conference of the Pennsylvania Tuberculosis Society took place in the Penn-Harris Hotel, Harrisburg, January 26. This meeting will mark the thirtieth anniversary of the founding of the society, which was the first organization of its kind in America. The death rate from tuberculosis in Pennsylvania has dropped from 133.9 per hundred thousand population in 1909 to 105, for the same population in 1920, declared Arthur M. Dewees, secretary of the Pennsylvania Tuberculosis Society, at the opening of the convention of the society. Dr. Charles H. Keene, director of the bureau of health education of the state department of public instruction, spoke on conditions in the public schools which contribute largely to the sum total of sickness, the number of defectives and the unnecessary deaths in the country.

Philadelphia

College of Physicians of Philadelphia.—At the annual meeting of the College of Physicians, held, January 4, at Philadelphia, the following officers were elected for the year 1922: president, Dr. Thomas R. Neilson; vice president, Dr. Hobart A. Hare; secretary, Dr. John H. Girvin, and treasurer, Dr. Charles W. Burr.

To Retain Dr. Deaver.—The board of managers of the University Hospital will extend the age limit for professors to enable Dr. John B. Deaver to continue as head of the surgical department of the University Medical School. Dr. Deaver will be 67 years old, July 25, and the board of managers was unanimous in the desire to retain him.

Special Clinics to Be Opened.—With the establishment in the near future of a special heart disease clinic at the Philadelphia General Hospital, work began by a nucleus of about fifty physicians a year ago will have taken another stride forward. Such clinics were established within the last year at the Presbyterian, Pennsylvania and Mount Sinai hospitals. Others at the University and Polyclinic hospitals, in connection with medical school cardiovascular sections, are of recent date. Before 1923, it is expected that twenty more cardiac clinics will be established in Philadelphia, through the propaganda of members of the Philadelphia Association for the Prevention and Relief of Heart Disease. Clinics are complete with a chief, assistants for examination, diagnosis and history taking, a dentist, a nose and throat specialist, a roentgen-ray operator, a laboratory expert, an electrocardiographer and a social service department, which is a link between the home and exercise classes, and the hospital and convalescents' homes.

Personal.—Dr. Marnetta E. Vogt and Dr. Miguela Gemil, a special Chinese student at the Woman's College Hospital, who were with Dr. Ella B. Everitt at the time of her death, were slightly injured in the crash.——Dr. John A. Fordyce, professor of dermatology and syphilology, Columbia University, delivered the annual address at the meeting of the Philadelphia Urological Society, in Thomson Hall, College of Physicians, January 23, his subject being "Prognosis of Syphilis."——Dr. Clemens Pirquet, professor of pediatrics, University of Vienna, delivered an address before the Philadelphia Pediatric Society, January 24, in Cadwalader Hall, College of Physicians, his subject being "The Work of the American Relief Administration in Vienna," and a discussion of certain phases of his nem system of nutrition.——Dr. L. Webster Fox has been reelected president of the Pennsylvania Home Teaching Society and Free Circulating Library for the Blind.——Dr. Hans Zinsser, New York, delivered the seventh Mary Scott Newbold lecture at the College of Physicians, February 1, his subject being "Changes in Our Conceptions of Antigen-Antibody Reactions."

TENNESSEE

State Medical Meeting.—The eighty-ninth annual meeting of the Tennessee State Medical Association will be held, April 11-13, at Memphis.

TEXAS

Hospital News.—The contracts have been awarded for the fourth unit of the American Legion Memorial Hospital, Kerrville at a cost of $490,460.

Medical Arts Building for Dallas.—The contracts have been awarded for the construction of the Medical Arts Building, at a cost of approximately, $1,000,000.

Physician to Become Medical Missionary.—Dr. James H. Ray, Denton, has been appointed by the board of foreign missions of the Methodist Church for medical missionary work in Old Mexico.

VIRGINIA

Personal.—Dr. McGuire Newton, Richmond, has been appointed a member of the state board of health to fill the vacancy caused by the death of Dr. Edward McGuire. The term of office expires, July 1, 1925.——Dr. Julian M. Robinson has been elected post commander of the Danville Post, American Legion.——Dr. Gerald A. Ezekiel, Richmond, has been assigned to the Three Hundred and Fifth Medical Unit, with the rank of major, in accordance with the assignment orders for the Eightieth Division, Officers' Reserve Corps.

WASHINGTON

Health Conference.—It has been announced that a conference of nurses and public health workers of Washington, Idaho and Montana will be held in Spokane, April 17-22.

Personal.—Dr. Charles C. McCown, Yakima, has been appointed county health officer to succeed Dr. Richard Connell, who was severely injured in an automobile accident.

Hospital News.—The Lane Cottage Hospital, Okanogan, was opened in December. The building is equipped with all modern improvements and was erected at a cost of $6,000. It will accommodate twelve patients.

WISCONSIN

Health Board Election.—At the annual meeting of the Wisconsin state board of health, held, January 12, at Madison, the following officers were elected: Dr. William F. Whyte, Madison, president; Dr. Edwin P. Hayes, Eau Claire, vice president, and Dr. Cornelius A. Harper, Madison, state health officer.

Medical Meeting.—At the annual meeting of the Milwaukee Medical Society, held, January 10, the following officers were elected for the ensuing year: president, Dr. Curtis A. Evans; first vice president, Dr. William Thorndike; second vice president, Dr. Alfred L. Kastner; secretary, Dr. Lawrence G. Sykes, and treasurer, Dr. Joseph P. McMahon.

CANADA

Graduate Course in Radiology.—The University of Toronto has instituted a graduate course leading to a diploma in radiology. Candidates for the diploma are required to be graduates in medicine of this university, or of some other university recognized for this purpose by the senate. They must also have spent at least one year after graduation as an intern in a recognized hospital. The curriculum leading to the diploma extends over one winter session of eight months. Classes will be limited, and the schedule will include roentgenographic technic, interpretation and gastro-intestinal examination.

Ontario License Board's Clemency.—The Ontario license board has lifted the suspension imposed on all those physicians whose liquor prescriptions did not exceed seventy-five during the month of December. The remission of penalty affects at least 250 Ontario physicians, who had not already received special individual forgiveness at the hands of the board. Originally there were 335 physicians suspended at dispensaries for issuing more than the prescribed fifty prescriptions during the Christmas month. More than sixty of them made representations which satisfied the board, and their suspensions were lifted. There are still twenty-four under the ban at the dispensaries for various terms, all of whom have issued more than seventy-five prescriptions during the month of December.

Public Health News.—With a strong plea that any reduction in the estimates of the department of health, Toronto, would be reflected in the activities of the staff during the year, the local board of health chopped $9,000 off the estimates by Dr. Hastings, medical officer of health, for this year. An item of $2,640 for the care of measles patients was struck

out, another of $2,675 for the increased cost of coal for the isolation hospital, and another of $4,024 for the increased cost of supplies for the isolation hospital. Dr. Hastings will endeavor to keep his needs down to $855,366 for this year. ——A warning was issued recently by the board of health for the province of Quebec to all municipalities throughout the province that a return of the drastic influenza epidemic of 1918 was imminent, and urging every possible precaution.—— In view of the seemingly increasing prevalence of coughs, colds and other bronchial troubles, together with the reports of epidemic influenza from the various states and provinces, Dr. George G. Melvin, chief medical officer of the department of public health of New Brunswick, issued a warning recently to the public to observe all possible precautions.—— Provided the city solicitor of Chatham, Ont., gives the opinion that it is legal, the city council will grant $70 a month to the committee in charge of the baby clinic, until October 31, the end of the council year. The decision was made at an adjourned meeting of the council recently, and during the discussion the unanimous opinion was expressed that clinics should be taken over by either the provincial or the federal government.

University News.—There are at present 189 graduated physicians attending the University of Toronto who are studying for special degrees. The majority are registered for the M.A. degree, while only three students are entered for the degree of M.D. While the university has no separate faculty of graduate studies, through the board of graduate studies it is forming a nucleus for such a faculty, that professors may be free to devote time to research work and to the instruction of graduate students. The junior members of the staff are also availing themselves of this opportunity to increase their academic standing, about 70 per cent. of them being enrolled.——Emphatic denial of the suggestion that a German system was being followed was recently given by Sir Robert Falconer, president of the University of Toronto, in regard to the criticisms that have been made in connection with the reorganization of the Faculty of Medicine. The reorganization, he said, was for the purpose of coordination and to make the department more effective; the system had been tried out successfully in England, and there was nothing German about it. In regard to returned men being overlooked in the reorganization, younger men have been selected, but those overlooked have been amply compensated.

GENERAL

American Congress on Internal Medicine.—The sixth annual session of the congress will be held, April 3-8, at Rochester, Minn., under the presidency of Dr. Sydney R. Miller, Baltimore.

American Association of Anatomists.—At the recent annual meeting of the association, held in New Haven, Conn., the following officers were elected for the ensuing year: president, Dr. Clarence M. Jackson, University of Minnesota, Minneapolis; vice president, Dr. Harold D. Senior, New York, and secretary-treasurer, Dr. Lewis H. Weed, Johns Hopkins University, Baltimore.

Proposed Deputation to Study Health Problems of Missionaries.—At the Foreign Missions Conference of North American Boards, held, January 11-13, at Atlantic City, N. J., preambles and a resolution were reported to the committee of reference and counsel for action. By this action the conference requested consideration of the wisdom of sending and the ways and means of financing a medical deputation to some selected field or fields to study and report on the medical work and the health problem of the missionary staff.

Steel Memorial Medal Awarded.—The council of the Royal College of Veterinary Surgeons has awarded the Steel Memorial Medal for 1921 to Dr. Albert Hassall, Zoological Division of the Bureau of Animal Industry, Washington, D. C. This medal is awarded at intervals of three years on the recommendation of the donors and prizes committee for scientific or literary work of merit in connection with the veterinary profession. The author catalogue was published as a joint work of Dr. Charles Wardell Stiles and Dr. Hassall as Bureau of Animal Industry Bulletin 39, and the subject catalogues covering the cestodes, trematodes and nematodes have been published by these authors as bulletins of the Hygienic Laboratory, U. S. Public Health Service.

Legislation Proposed for Storing Alcoholic Liquors.—A bill has been favorably reported from the Ways and Means Committee of the House of Representatives which will permit distilled spirits to be stored in as few as twenty warehouses, in place of the 304 bonded warehouses throughout the country in which are now stored 38,000,000 gallons of liquor. The bill was drafted by officials of the Treasury Department, and is approved not only by them but also by holders of warehouse receipts and organizations interested in prohibition enforcement. Reasons for the favorable report of the bill are that it is less expensive to guard twenty warehouses than 304; that it will save from $300,000 to $600,000 for the government in storage and other charges, and that it will relieve holders of warehouse receipts of unnecessary expense and hazard occasioned by existing requirements.

LATIN AMERICA

Public Health School in Mexico.—The department of public health of Mexico has opened a school of public health. Dr. F. Zárraga will be in charge.

Medical Chief of Child Hygiene Service.—Dr. Fernandes Figueira of Rio de Janeiro, president of the Brazilian Pediatric Society, has been appointed chief of the child welfare department of the national public health service in Brazil.

Antiopium Campaign in Cuba.—The secretary of public health, Dr. Guiteras, has ordered Dr. Penichet to investigate the clandestine importation of opium in Cuba, and especially, the disposal of 185 kilograms recently brought into the country.

Reorganization of Medical Society.—The following officers were recently elected by the Medical Society of Vera Cruz: president, Dr. R. Cuervo; vice president, Dr. N. L. Melo; secretary, Dr. J. Solórzano Morfin; assistant secretary, Dr. S. Ruiz, and treasurer, Dr. C. Rodriquiez Mendoza.

New Monthly in Cuba.—A new journal, *Revista de Medicina Legal de Cuba*, has begun publication. It will be the official organ of the Society of Legal Medicine of Cuba. In the first number there is an article on "Morgues" by its editor, Dr. A. Barreras, who is also the president of the society.

Personal.—Dr. J. H. White has been appointed by the Rockefeller Foundation director of the Mexican commission against yellow fever, to replace Dr. T. C. Lyster, who has resigned this position. Dr. Lyster's withdrawal has been very much regretted in Mexico.——Dr. M. Alonzo Romero has been appointed mayor of the city of Mexico.——Dr. R. Pardo has been appointed mayor of the city of Oaxaca.——Dr. E. Arosemena has returned to Panama after his graduation from the University of Edinburgh, Scotland.——Dr. R. Holguin has returned to Puerto Colombia, after spending several months in New York. Dr. Holguin expects to open his office in Colón, Canal Zone.——Dr. F. Menocal, a prominent Havana physician, is now visiting in New York.

Organization of the Profession in Argentina.—The *Bulletin* of the Sindicato de Médicos of Buenos Aires states that during the eight months since the organization of the Argentine Medical Syndicate it has already over 300 members enrolled. It was the first organization of the kind in South America, but was soon followed by the foundation of a similar syndicate in Uruguay, which has already accomplished good work. The aim of these organizations is stated to be not only the interests of the profession from all standpoints but to awaken in physicians the consciousness of their importance as a factor in general progress. Dr. N. Capizzano is director of the *Boletin*, and he appeals to the profession at large to stop and think for five minutes of the future of the profession. He says that he is certain that all who do this will want to be enrolled as a member of the syndicate.

FOREIGN

Hospital News.—A children's department has recently been established at St. Luke's International Hospital, Tokyo. The hospital is in charge of Dr. Margaret H. Sutley, a graduate of the University of Colorado School of Medicine.

Royal College of Physicians of Edinburgh.—The annual meeting of the Royal College of Physicians of Edinburgh was held in December. Sir Robert Philip, M.C., LL.D., was elected president, and Dr. Harry Rainy, vice president for the ensuing year.

Memorial to Emil Fischer.—A statue of Emil Fischer was recently unveiled on the Luisenplatz, Berlin, opposite the statue of Robert Koch. A bronze bust of the chemist, who died in 1919, was also presented recently to the Chemical Institute by Dr. H. Fischer.

New Italian Neurologic Journal.—The *Policlinico* calls attention to the journal, *Il Cervello* ("Brain") which has been recently founded at Naples by a group of neurologists,

all members of the medical faculty. It is a bimonthly, subscription 40 liras. The address is Manicomio Provinciale di Napoli, Italy.

Resumption of Medical Journal.—It has been announced that the *Archives internationales de laryngologie, d'otologie et de rhinologie*, which ceased publication at the beginning of the World War, resumed monthly publication under the direction of Dr. F. Lemaitre and Dr. L. Baldenweck of Paris, in January.

Tokyo Charity Hospital Medical College.—The Tokyo Charity Hospital Special Medical School was raised, October 20, to the rank of a private university consisting of a single faculty, a medical college, which is the first instance of the kind to occur in Japan. There are sixty professors and 616 students attached to the medical school at present. Dr. Eigoro Kanasugi, who was chief assistant to the late president of the school, has been recommended as the president of the new college.

Hospital Bill Introduced in Australia.—A hospital bill was recently introduced into the legislative assembly of western Australia for the purpose of insuring that "the provision of public hospitals shall be the concern of the various local governing bodies throughout the state, as well as of the government." In view of the drastic nature of the changes provided by this measure, special action has been taken by the western Australian branch of the British Medical Association to deal with its provisions.

Japanese Medical Association.—The sixth annual session of the Japanese Medical Association was held, November 25-26, at Tokyo, under the presidency of Dr. Kitasato. Resolutions were adopted for the establishment of an investigation board for the prevention of the sale of "patent medicines" and the practice of quackery, and for the control of hospitals under unified regulations. A government inquiry as to the best measures to be adopted for the prevention of venereal diseases was submitted to the investigations of a special committee.

International Study of Industrial Accidents.—A special section for the study of the problems of industrial safety, both in their national and international aspects, has been created in the International Labor Office, Geneva, in order to fulfil the objects of the International Labor Organization as laid down by the Peace Treaty "to protect the worker against sickness, disease and injury arising out of his employment" and to study the existing systems, practices and devices for eliminating human wastage and discover remediable deficiencies in those systems.

Tercentennial of Molière.—This year has brought the three hundredth anniversary of the birth of Molière, and it had been proposed to celebrate it at Paris with gala representations of his plays, banquets, etc., and with a public meeting at the Sorbonne. A writer in a daily paper protested against this place for the public tribute, saying "The Sorbonne—part of the University of Paris—is the last place for a tribute to Molière, for if ever a poet was cordially detested it was by every one connected with the Sorbonne." Linossier replies to this in the *Paris Médical* for December 31, with a witty harangue showing the appreciation of the medical profession for Molière's raillery of their foibles, and declaring, like his Sganarelle, that "nous avons changé tout cela." Molière is said to have been born Jan. 15, 1622, at Paris.

Prizes of the French Academy of Medicine.—The Académie de Médecine at Paris has 81 endowed prizes to award, and 47 were available this year. There was no competition for 6, and the works offered in competition for 10 others were not considered worthy of the award, so that only 31 were distributed at the annual meeting in December. A total of 84 competing works were received. A number of the prizes were given for important scientific work done during the year, most of which has been summarized in THE JOURNAL, such as Béhague's work on traumatic epilepsy, Cornioley and Kotzareff's, of Geneva, on traumatic toxemia and burns, and Tillot's on reawakening the hearing. One prize was awarded to Dr. J. Glover for his methods of telephoning by utilizing the skeleton as a transmitter (important during the war for telephoning while wearing a gas mask), and electric auscultation. The *Bulletin* for Dec. 13, 1921, gives the list of prizes open to international competition in 1923 and 1924. Only 10 of the prizes are restricted to persons of French birth. The secretary commented on the handicap that results from too specific directions in regard to the awarding of a prize, as conditions change so much in the course of years. The Audiffred prize is still unclaimed. This was offered for a "sovereign remedy for tuberculosis to be found within twenty-five years from 1896." The prize is 3 per cent. government bonds representing an income of 24,000 francs.

Deaths in Other Countries

Dr. **B. Liknaitsky,** died, December 24, in Johannesburg, South Africa.——Dr. **John Galloway,** health officer of Port Elizabeth, South Africa, died, December 22, from pneumonia. ——**Sir German Sims Woodhead,** professor of pathology, University of Cambridge, England, president of the British Medical Temperance Association, died, December 29, aged 66.——Dr. **G. M. Edmond** of the University of Aberdeen, Scotland, died, December 18.——Dr. **W. Gärtner,** privatdozent of bacteriology at Kiel, member of the medical mission to Russia sent by the German Red Cross, has succumbed to typhus at Kazan.——The *Revista de Medicina* of Havana notes the death of Dr. **Manuel Manforroll,** director of the hospital at Santiago, Cuba, formerly director of the national laboratory and at one time in the marine hospital service of the United States and later professor of anatomy and bacteriology in Central America.——The *Revista de Beneficencia Pública* of Santiago, Chile, chronicles the death from typhus of Dr. **J. de la Vega Abrines,** professor of pathologic anatomy and hospital prosector.——The *Brazil Medico* mentions the ceremonies at the burial of the late professor of legal medicine at the University of Rio de Janeiro, Dr. **A. J. de Sousa Lima.**

Government Services

Need for Workers in Rehabilitation

The United States Civil Service Commissioner states that there is urgent need for reconstruction assistants and aides in physiotherapy and occupational therapy, trained nurses and physicians to serve in hospitals and other establishments of the U. S. Public Health Service and the Veterans' Bureau, in the care and rehabilitation of men injured in the World War. Applicants will be received until further notice, and they will not be given written scholastic tests, but will be rated on their education, training, experience and physical ability. Information and application blanks may be obtained from the U. S. Civil Service Commission, Washington, D. C., or from the secretary of the local board of civil service examiners at the postoffice or custom house in any city.

Decoration to Dr. Charles Halliday

Dr. Charles Halliday, U. S. Public Health Service, has been awarded the decoration "Krzys Walecznych," with one from the minister of military affairs of Poland, for services rendered Poland while attached to the American Red Cross in 1919 and 1920. The presentation was made by Major K. Mack, military attaché of the Polish legation to the United States. This is the second decoration received by Dr. Halliday from the government of Poland, the first one having been awarded for services rendered by him to the Polish army in France during the war.

U. S. Veterans' Hospital

Announcement is made by the Public Health Service that hospitals for ex-service men will all hereafter be designated as U. S. veterans' hospitals. The hitherto existing practice of designating these institutions as U. S. public health hospitals will be discontinued. This change has been made at the instance of Director Forbes of the Veterans' Bureau, for the reason that none but war veterans are patients in such hospitals, and the new name more accurately describes these institutions than their former designation. All future hospitals that may be established by the Public Health Service for soldier patients will also be known as U. S. veterans' hospitals. The foregoing plan does not apply to the U. S. marine hospitals, and no change has been made in the names of the twenty-three marine hospitals. Four Public Health Service hospitals, however, will be excepted from the new arrangement, and will be designated as U. S. marine hospitals. These four hospitals are located at Norfolk, Va., Ellis Island, N. Y., Carville, La., and New York City. No change whatever is contemplated in the administration of any of these hospitals, and

their control and direction will still remain in the U. S. Public Health Service. Thus, all government hospitals will be divided into two classes, U. S. marine hospitals and U. S. veterans' hospitals.

U. S. Veterans' Bureau Clean-Up Campaign

As a result of a clean-up campaign by the U. S. Veterans' Bureau, it is claimed that thousands of cases of disabled war veterans have been found who were unaware of their rights to treatment at the hands of the government. Most of these cases were discovered in the remote mountainous and rural communities. In some instances the ex-service men were found suffering with serious disabilities. In a summary of the work done by the U. S. Veterans' Bureau in searching out and examining World War veterans, it is claimed that 159,223 have been interviewed and that 101,714 cases have been handled.

Appropriations for Veterans' Bureau

Representative Will R. Wood of Indiana presented a bill to Congress this week making appropriations for the executive and sundry executive bureaus, boards and commissions for the coming fiscal year. Included in the list is the U. S. Veterans' Bureau. The items contained in the measure are: salaries and expenses of all offices, $25,815,942; compensation for death and disability, $160,000,000; medical and hospital services, $64,658,680. The U. S. Veterans' Bureau is given the right in the proposed act to portion out parts of this appropriation to be used by the U. S. Public Health Service, the board of managers of the National Home of Disabled Soldiers, and the War, Navy and Interior departments.

Veterans' Bureau Dispensaries

Director Charles Forbes of the U. S. Veterans' Bureau has announced that 140 dispensaries will be established in the various districts and subdistrict offices of the bureau, if his recommendations to the President are acceptable. For some time the proposal to open these dispensaries so as to render prompt and immediate aid and medical service to disabled war veterans has been under consideration as a necessary adjunct to the offices of the Veterans' Bureau. The present personnel will be utilized as far as possible, and the dispensaries will be equipped with dental, physiotherapy, roentgen-ray and examining rooms, laboratory and pharmacy facilities. Establishment of these dispensaries will to a great extent dispense with the services of private physicians as well as dentists, and the previous roentgen-ray and pharmacy services performed by private institutions will also be eliminated.

United States Public Health Service Takes Action on Spread of Influenza

In response to inquiries addressed to the United States Public Health Service as to the possibility of an epidemic of influenza coming to the United States through tranmission from European countries in which there is a considerable incidence, Surgeon-General Cummings has communicated with the health commissioner of New York City and the surgeon in charge of the U. S. Quarantine Station at New York. It is noted that there have been at all times a considerable number of cases of influenza in this country, and that introduction from abroad is not necessary in order to produce infection. Nevertheless, the quarantine officer has been instructed to remove and to hold until convalescent such immigrants as show clearly signs of having influenza of the epidemic type. At the same time, Assistant Surgeon-General Blue, in charge of the U. S. Public Health Service abroad, has been informed that there is considerable alarm in this country as to the reports of influenza in Europe, and has been asked to instruct service representatives in England and the continent to prevent embarkation of any steerage passenger presenting active symptoms of influenza. It is not contemplated that passengers with ordinary colds or bronchial conditions of nonspecific character will be included under these regulations, or that any inspection will be made of cabin passengers.

Foreign Letters

LONDON

(From Our Regular Correspondent)

Jan. 2, 1922.

The School Medical Service

The annual report of the chief medical officer of education shows the extent to which the school medical service has grown in a few years. During the year 1920-1921, the children who attended the public elementary schools of England and Wales numbered 5,187,000. Of these, approximately 2,400,000 were medically examined during the year, in three groups, at the ages of 5, 8 and 12 years, the first age being that of entry and the last that of leaving school. The medical staff consists of about 800 whole-time medical officers, many of whom are also health officers, and 730 part-time medical officers. These are employed in 900 school clinics; but many others are engaged in the 391 hospitals which undertake some of the school work. In addition to the regular examination of the children at the stated ages, sick and ailing children are especially examined. When the school medical service was started, three disadvantages were anticipated: that it would pauperize the parent and destroy the sense of parental responsibility; that it would impose an unremunerative burden on the ratepayers, and that it would have a detrimental effect on the work of the private physician. According to the report, none of these have been realized. Parental responsibility has been stimulated, the investment is yielding a high interest, and medical treatment has been so safeguarded as to secure the support of the profession. The school medical service is not duplicating but supplementing and enhancing the work of the private physician. An important indirect effect of the service is that it has taught the educationist that children must be handled as individuals and not in bulk. A growing interest of teachers and parents in the health of children is evident. The teachers have great influence in persuading parents to have defects in their children attended to. It is becoming the custom for school medical officers to undertake collective investigations into the health of children.

Of the 2,400,000 children examined, no less than 47.9 per cent were suffering from defects. A comparative investigation was made of groups of children classified according to environment as follows: industrial areas, residential towns and rural areas. The curious result was that the percentage of defects was smallest in the residential towns, while the rural areas were scarcely ever better than the industrial towns or than London; indeed, in diseases of the nose and throat, they showed the highest return of all four groups. The amount of dental defect is enormous: 70 per cent. of the children required treatment for caries. The number of abnormal children, exclusive of dull and backward ones, is estimated at 164,500. Of these, 37,000 are mentally defective, 6,500 are epileptics, 36,000 are cripples, 20,000 have pulmonary tuberculosis, 6,000 are blind and the same number are deaf.

Reform of the Lunacy Laws

A conference on the administration of the lunacy laws has been summoned by the board of control (the official body which controls their administration). Meanwhile the Mental Hospitals Association has published a pamphlet entitled "Thirty Years' Administration of the Public Asylums in England and Wales." It is claimed that the attacks on asylum management are rather beside the mark and that, on the whole, the asylums are well inspected and the patients enjoy good food, warm clothing and ample recreation, and are cared for by able and conscientious physicians and nurses. It is the lunacy law which requires reform. One of the

objects of the association is to obtain their amendment so that incipient mental derangement may be treated before the stage is reached which compels certification and detention of the patient in an asylum. It is thought that a great number of the patients in our asylums whose cases are regarded as irrecoverable might be useful and healthy citizens if they had had the advantage of skilled treatment in the early stage. As the law stands, power to receive voluntary boarders in mental hospitals does not exist. Such facilities are provided on the continent of Europe and in the United States in the form of public and private "clinics in psychiatry." But here many people on the verge of mental illness dread even the mention of the word asylum and this dread is often shared by their friends and relatives. The association is also anxious to eliminate the taint of pauperism which attaches to patients in asylums.

Birth Rate Commission's New Inquiry

The national birth rate commission was established in 1911 and its reports have from time to time been reviewed in THE JOURNAL. Last year, it held an inquiry into the prevention of venereal diseases. This year it will concentrate on the social protection of adolescence. Expert committees have been set up for the whole country and a similar movement is being started in the Dominions. The inquiry embraces human development from the physiologic and psychologic standpoint, the influences which affect our young citizens as potential parents, the effects of diet, the dual functions of the sex glands, methods of providing sex education, the influence of recreation and the influence of industrial occupations on fertility, and the preparation of adolescents for worthy citizenship.

A New Insulator

During the war, a food investigation board was appointed by the government. The board was soon brought in contact with the fact that cold storage forms an important bridge between inconstant supply and constant demand, and that the practical methods are uncertain. A subcommittee, appointed to investigate the various materials used to prevent external heat passing through the walls of the cold storage reservoir, concentrated first on thermal conductivity. The work was carried out at the national physical laboratory and required the devising of a number of new methods. On the British system, the thermal conductivity of a material is the quantity of heat in the British thermal units (a B. T. U. is the amount of heat necessary to raise 1 pound [453.6 gm.] of water 1 degree Fahrenheit) which flows, per square foot (0.09 square m.) per hour, through 1 inch (2.5 cm.) thickness of material for a difference of 1 degree Fahrenheit between the faces. This number is 2,903 times that which expresses the conductivity on the international or C. G. S. (centimetre-gramme-second) system. According to the British system, the thermal conductivity of wood is 1. It is not so good a nonconductor as a number of materials—cork, slagwool, charcoal and wood fibers. The number for these is 0.32. In the course of the work, it was discovered that, in a vertical wall of insulating material, heat passes rapidly upward from the bottom toward the top. This and other observations led to the conclusion that the value of insulators depends on the presence in their spongy interstices of relatively stagnant air. The more freely the air could flow by convection currents, the more rapidly heat leaked. Still air was found to have a conductivity barely half of that of the best insulating materials. It was concluded that there still was room for improvement through finding a more suitable material in cellular form. At this point, a new material was brought to the notice of the committee, so late that they were able only to state its high promise in a supplementary note. It consists of rubber expanded by gas into a highly cellular form. Under a low-power microscope, it is seen to consist of minute air cells bounded by rubber membranes. The boundary walls themselves have a low conductivity and the stagnant air contained in them presents the ideal condition for resisting the passage of heat. This form of rubber is an extremely light solid, only about half the weight of cork, and it has a conductivity lower than that of any material hitherto studied, being only half as much again as that of still air. It is prepared by vulcanization under a gaseous pressure of about 100 atmospheres, and is totally different from the ordinary spongy rubber, which is heavy, porous and absorbent.

PARIS

(From Our Regular Correspondent)

Jan. 6, 1922.

The Population of France in 1921

As a rule, an enumeration of the inhabitants of France has been made once in five years, and under normal conditions a census would have been taken in 1916, the previous enumeration having been made in 1911, but, by reason of the war and the occupation by the enemy, during hostilities, of a part of French territory, it was postponed and was not taken until March 6 of last year. Since coming again into possession of the three departments of Alsace and Lorraine (the departments of the Moselle, Bas-Rhin and Haut-Rhin), France comprises ninety departments, exclusive of Algeria. According to the enumeration of March 6, the total population of France is 39,209,766. In 1911, the figures were 39,604,992. It should be noted that the 39,209,766 inhabitants recorded in March, 1921, include 1,709,749 inhabitants of the departments of Alsace and Lorraine. The population of the eighty-seven departments existing before the war has, therefore, been reduced to 37,500,017, a diminution, as compared with 1911, of 2,104,975. This decrease is due, for the most part, to the losses suffered during the war; secondly, to the reduction in the birth rate which resulted therefrom, and, finally, to a certain extent, as regards certain departments, to serious epidemics of influenza. It should be stated, however, that the decrease in population such as results from the calculation that I have just presented is higher than it really should be. It should be taken into account that on March 6, 1921, a large number of Frenchmen were in foreign countries in the army and navy services and consequently were not counted in at the regular census. They were, however, included in a special census taken by the army and navy authorities. The number of Frenchmen serving in the army outside of France was 150,000. The number of marines was 19,137, and the number in the merchant marine (on the high seas or in foreign harbors) was 23,836, making a total of 192,973 outside of France on the day of the census. Taking account of these rectifications, the total population of France, including Alsace and Lorraine, but excluding those who are permanently located in Algeria, in the colonies and in foreign countries, may be placed at 39,402,739.

The decreases in population due to war losses have affected all departments with the exception of the following eight: Alpes-Maritimes, Bouches-du-Rhône, Hérault, Pyrénées-Orientales, Rhône, Seine, Seine-Inférieure and Seine-et-Oise. The increase in these eight departments is due to an influx from other departments, and, to a certain extent, to the presence of refugees who either have taken up their permanent abode there or are merely waiting for the time to come when they will be able to reenter their devastated communes. The departments that were invaded by the enemy show, of course, the greatest decrease, since some of their population has been unable to return. Thus, as also became evident from the census of 1911, the urban population continues to increase at the expense of the rural population. While the total popu-

lation of France has decreased in the manner indicated, the population of the cities with more than 30,000 inhabitants has increased in the prewar departments alone to the extent of 259,039. The cities that have increased most are: Lyons (37,796, increase), Marseilles (35,722), Havre (27,215), Toulouse (25,858, Saint-Etienne (19,311), Paris (18,362), Clermont-Ferrand, Perpignan, Villeurbanne, Nantes, Nice and Boulogne-sur-Seine.

In 1911, fifteen cities had more than 100,000 inhabitants, which is the same number as in 1921. Rheims, which, according to the census of 1911, had a population of 115,178, today has only 76,645; but Strasbourg fills the gap with 166,767. These fifteen cities rank as follows: Paris, 2,906,472; Marseilles, 586,341; Lyons, 561,592; Bordeaux, 267,409; Lille, 200,952; Nantes, 183,704; Toulouse, 175,434; Saint-Etienne, 167,967; Strasbourg, 166,767; Havre, 163,374; Nice, 155,839; Rouen, 123,712; Roubaix, 113,265; Nancy, 113,226; Toulon, 106,331.

Endowments for Laboratories

Monsieur Albert Turpain, professor of physics on the faculty of sciences, Poitiers, and director of the physical laboratory of the University of Poitiers, has recently prepared a statement setting forth the sums devoted, in the budget of 1921, to scientific research and to the use of laboratories. Under the heading "universities; equipment," the laboratories were given 7,300,000 francs, but in reality scarcely 3,000,000 francs of this sum ever reached the laboratories. Three million francs for all the laboratories of sixteen universities! The sum seems quite ridiculous, especially if it is compared with the resources placed at the disposal of American universities. According to Turpain, the expense budget of the state of New York carried in 1909 the item of $30,000,000 for public education, and in 1919 this sum had been increased to $87,000,000. That is to say, it had tripled in ten years. The endowments of six of the principal American universities for the same year (1919) were:

	Students	Endowment	Endowment per Student
Columbia	5,675	$28,542,000	$5,029
Harvard	5,342	21,011,000	3,933
Yale	3,466	10,561,000	3,040
Cornell	4,700	8,800,000	1,874
Princeton	1,200	4,000,000	3,333
Pennsylvania	4,556	3,438,000	730

Fortunately, the Caisse des recherches scientifiques (fund for scientific research), the appropriations for which are for the most part derived from revenues accruing from a tax levied on the funds of the pari mutuel, makes up, to a certain extent, for the meager resources that the French government places at the disposal of our laboratories. Monsieur Colson, president of the administrative council of the Caisse de recherches scientifiques, recently filed with the president of the republic his annual report on the work accomplished by this organization. During the year 1920, the total resources of the fund amounted to 1,019,000 francs, 720,000 francs of which was derived from the pari mutuel. The total expenditures amounted to 355,486 francs. For biologic researches, 70,000 francs was appropriated. For researches on the purification of residue waters, 48,000 francs was allotted. For still other scientific researches, an allocation of 24,200 francs was made.

Among the more important grants made for biologic investigations may be mentioned: 10,000 francs to Monsieur Legendre, of the Museum of Natural History, for his studies on the action of anesthetics; 4,000 francs to Dr. Achard, professor of the Faculté de médecine of Paris, for continuation of his researches on the effect of various bread flours on nutrition; 4,000 francs to Dr. Brumpt, professor of the Faculté de médecine of Paris, for his studies on the parasitic diseases of animals; 4,000 francs to Dr. Vincent, professor of the Ecole du Val-de-Grâce, for his studies on serotherapy in typhoid fever; 3,000 francs to Dr. Gley, professor of the Collège de France, for his researches on the internal secretions, and 3,000 francs to Dr. C. Nicolle, director of the Pasteur Institute of Tunis, for his investigations on the infectious diseases of northern Africa.

Monument to Dr. Magnan

A number of former pupils, friends and confrères of the late alienist, V. Magnan, former president of the Academy of Medicine, and chief physician of the admission service of the Asile clinique Sainte-Anne, have hit upon the happy plan of erecting a monument to that illustrious representative of French psychiatrists. It is proposed that the monument be unveiled the coming May, on the occasion of the celebration of the centenary of the discovery of general paralysis by Bayle. Thus, the two schools of French psychiatry, that of Charenton and that of Sainte-Anne, will unite to pay their respects to the memory of Magnan, the former head of Sainte-Anne.

Every subscription of forty francs will entitle the donor to a commemorative plaquette representing the monument. Subscriptions may be sent to Monsieur Masson, éditeur, trésorier du comité; 120, Boulevard Saint-Germain, Paris (VIe).

Retirement of Dr. Darier

Following Drs. Brocq and Thibierge, Dr. Darier has also reached the age of retirement for a hospital physician and recently severed his connection with the Hôpital Saint-Louis. On this occasion, his pupils and friends presented him with a medallion likeness of himself, engraved by Dr. Paul Richer, and his bust, executed by Dr. Sabouraud. The ceremonies took place in the large hall of the Saint-Louis Museum. Among those present were: Professor Roger, dean of the Faculté de médecine, Professors Vaquez, Sergent, Gley; Drs. Brocq, Hudelo, Sabouraud, Paul Ravaut and others. Addresses were delivered by Dr. Rist, the oldest intern under Darier; Dr. Hudelo, general secretary of the Société de dermatologie; Professor Nicolas of Lyons, and Dr. Graham Little of London.

Foreign Associate Members of the Academy of Medicine

At a recent meeting, the Academy of Medicine elected three foreign associate members from the following lists: First choice: Sir Ronald Ross of Liverpool, Dr. W. W. Keen of Philadelphia, and Dr. W. H. Welch of Baltimore; second choice: Sir David Bruce of London, Dr. Canton of Buenos Aires and Prof. C. Roux of Lausanne. Sir Ronald Ross, Dr. W. W. Keen and Dr. W. H. Welch received a majority of the votes cast, and were declared elected.

The Coming Congress of Alienists and Neurologists

The twenty-sixth congress of alienists and neurologists of France and French-speaking countries will be held at Quimper, during the month of August, 1922, under the presidency of Prof. Jean Lépine, dean of the Faculté de médecine of Lyons. The main topics selected for discussion at the congress are: (1) the mental disorders associated with epidemic encephalitis; essayists: Dr. Truelle of Paris and Dr. Petit of Bourges; (2) the lesions of the central nervous system in motor disorders; essayist, Dr. Anglade of Bordeaux, and (3) social service work among psychopaths; the safeguarding of the rights of the individual and of society in the treatment of mental disease; essayist, Dr. Paul Courbon of Strasbourg.

D'Herelle's Book on the Bacteriophagum Intestinale

Since, in September, 1917, F. d'Herelle presented his first communication to the Académie des sciences on an ultramicroscopic organism antagonistic to dysentery bacilli, this bacteriophagic micro-organism has been the object of a great

number of interesting researches and we are under obligations to d'Herelle for having collected the data on the subject, which, up until now, were scattered through various reports of society proceedings, into a book (Masson et Cie, publishers), which forms a part of the series, "Monographies de l'Institut Pasteur." This work consists of two parts. In Part I, the author takes up the study of the morphology and the biology of the bacteriophagic ultramicro-organism. In Part II, he discusses the part played by the bacteriophagum in immunity and disease. No matter what the disease, the aspect, according to d'Herelle, is always the same. A pathogenic bacterium finds its way into an organism, whereupon one of two things happens. Either *Bacteriophagum intestinale* attacks the bacterium at once and destroys it before it can develop and the disease does not break out; or *Bacteriophagum intestinale* remains inactive, the bacterium develops and the disease manifests itself. The struggle may be carried over into the course of the disease itself. The bacteriophagum acquires increased virulence through contact with the pathogenic bacterium, while the bacterium, on the other hand, develops, through the same contact, increased resistance, and the ups and downs of this struggle for supremacy are faithfully registered by the varying condition of the patient. Convalescence begins from the moment that the virulence of the bacteriophagum is sufficient to allow it to get a definite upper hand. The outcome of the disease is fatal if the bacteriophagum remains inactive owing to unfavorable intestinal conditions or if the bacterium succeeds in developing a refractory state. [Compare with the editorial in THE JOURNAL, July 9, 1921, p. 126.]

PRAGUE

(From Our Regular Correspondent)

Jan. 4, 1922.

Chair of Propedeutics

A new clinic of propedeutics for clinical medicine has been established at the University of Prague. Professor Vesely has been placed in charge and will make use of his experience gained in Russia, where similar clinics are attached to every medical school. The clinic is designed as a center for the teaching of the general principles of clinical methods to medical students before they actually start their studies of the different branches of clinical medicine and after they have finished the first two years, which are devoted to theoretical studies. The clinic has found only a provisional building, but has been welcomed, especially by medical students, who have felt the need of it for a long time.

International Congress on Venereal Disease

The League of Red Cross Societies organized in Prague an international congress for the campaign against venereal diseases in eastern Europe. The congress was held December 5-10. Besides Czechoslovakia, Poland, Jugoslavia, Bulgaria and Greece were represented. The congress was held under the chairmanship of Professor Janovsky. Dr. Janovsky is professor of venereology at the University of Prague. The league was represented by Dr. Réné Sand of Belgium, the general secretary, and Col. T. F. Ritchie, the head of the venereal disease division. At the opening meeting, both the ministers of health and of social welfare were present. On the first day, papers were read on the progress of campaigns against venereal diseases in each of the respective countries. On the second day, medical measures were discussed by Professor Samberger of Prague University. The following day, education of the young in sex matters was on the program. This was separated from the instruction to the adult public on venereal diseases, which was considered later. The consensus of the members of the congress was that sex education should be started very early in the school and that it can best be given by the teachers, who must, of course, be well posted on the subject. Instruction on venereal diseases must be given by physicians and has to come later, before the child leaves school. The congress passed to a discussion of self-disinfection and military measures. All the members felt that this is a field which has been badly neglected up to date, although of paramount importance. The last day was devoted to the discussion of notification of these diseases. Although the members of the congress realized the value of this measure, they did not feel like recommending it under the present circumstances. Resolutions were drafted along the lines of the discussions and referred to the league for further action. It was the first time that the representatives of these countries had met for the discussion of common problems, and it is to the credit of the League of Red Cross Societies that it took the initiative in calling this congress.

New Gynecologic Department

The Prague medical faculty has opened a new building for gynecology. This was started during the war but could not be completed owing to war conditions. The building has modern equipment. There are more than 100 beds. One of the special features of the gynecologic department is that separate quarters have been provided for nurses. This is something which has been unknown up to this time in local hospitals and is due to the change of attitude toward nurses, which has developed largely as a result of the activities of the reorganized state school for nurses. This is the second new building that has been added to the Prague university during the year; and with it and the two new medical faculties opened in Brno and Bratislava since the armistice, the Czechoslovak government is making a good showing in medical education. It is due only to the enormous increase of the cost of building that many more new institutes have not been built, as the present accommodations are inadequate for handling the flood of foreign medical students who are flocking to Prague. Almost all the Prague hospitals have been requisitioned for the purposes of teaching.

BERLIN

(From Our Regular Correspondent)

Dec. 30, 1921.

A New Influenza Epidemic

Since the first great influenza pandemic of 1890, there have been several less severe and less extensive epidemics, and we are passing through one now. According to a statement issued by the Allgemeine Ortskrankenkasse (health insurance society) of Berlin, almost 1,500 new cases of influenza among members have been reported daily since the last week in December. Similar figures have been reported from other large cities of Germany. Fortunately, the course of the disease is, for the most part, mild, but there have been a number of deaths as the result of pneumonia developing in a few days. As to the therapeutic aspects of the situation, nothing new has been learned. Serotherapy and treatment with ethylhydrocuprein preparations are highly recommended by some, as before, while they are rejected by others.

Scientific Palmistry

At a recent meeting of the Berlin Anthropologic Society, Prof. Dr. Heinrich Poll, an investigator in the domain of the science of heredity, discussed the relationship between the lines of the fingers and mental gifts. As is well known, the lines of the fingers are utilized in criminal records as a means of identification. The examination of many millions of finger prints has revealed the fact that no two are exactly alike. Not even in twins do we find the same markings, and what is especially important, from the fourth month of the embryonic stage to the end of life, the lines remain unchanged. It is also worthy of note that the hereditary

development of finger prints has been established. The almost countless number of finger prints have been divided into distinct classes for better orientation. We have come to distinguish them as whirls, arches and loops. Poll has examined the finger prints of almost 6,000 persons, 3,844 of whom were sound mentally and 1,908 mentally defective. He found that there are no healthy persons who present in their finger prints arches or whirls exclusively, while loops are lacking. He discovered that women require a classification of finger prints different from that of men. He also established that various races present different types of finger prints and that certain markings, while common in youthful subjects, are rare in older persons. From this last fact, Poll concludes that persons with certain types of finger prints have a life expectancy different from that of others, since these lines remain unchanged throughout life. Should this assumption be confirmed by an exhaustive series of investigations (which Poll admits would be required), it would be of the greatest importance to life insurance companies. In hospitals for mental defectives, Poll examined feebleminded subjects, in some of whom the mental weakness was of an hereditary nature and in others of whom it was traceable to intra-uterine infection or to alcoholism in the parents. Poll claims to have established, further, that men with a certain number of "loops" in the finger tips are destined, for endogenous reasons, to become idiots. If, therefore, these observations of Poll that certain groups of persons are in danger of becoming idiotic should be confirmed, the time may come when we can figure out from the finger prints of the parents just how many children are likely to be idiots, especially if there are familial anomalies known to be present. Such a computation would then be possible for the reason that the hereditary transmission of finger prints would be in accordance with the mendelian law.

The Psychology of Sport

In the university school of gymnastics, established recently in Berlin, not only the researches on the physiologic processes connected with sport activities, as reported in previous letters (THE JOURNAL, Dec. 10, 1921, p. 1907; Jan. 7, 1922, p. 45), were carried out, but an endeavor was also made to approach the psychology of sport through an examination of the students. Some of the results of these investigations would seem to be of general interest. The preliminary steps were taken to work out, on a large scale, a system whereby the physical and mental subnormalities in pupils and adults might be definitely and readily established. Methods for testing the physical strength and endurance of large groups were tried out on about 100 members of the Berlin *Schutzpolizei* (a secondary protective force) and were found sufficiently simple and reasonably satisfactory. Body measurements taken of the pupils of a secondary school furnished a mass of material of great value in this connection. The researches are important, above all, by reason of the great simplicity of the methods and their practical significance in the attempts to raise the physical standard among all classes of the people. The researches on the effect of systematic physical training on mental capacity, which have been undertaken at the instance of the Prussian and the Berlin physical directors' clubs and other societies, will aid in the investigations outlined above. The tests that are being carried out on a large scale on schoolchildren, with the cooperation of the teachers and the medical fraternity, are for the purpose of determining the most favorable place, the best time and the most satisfactory method of giving training in gymnastic work.

The scientific investigation of sport activities has received an impetus from a number of good films representing various phenomena of sport as a whole. Extensive measurements in connection with the manifestations of fatigue as seen in physical directors themselves, and a thorough testing of the effects of the regular schedule of the university school of gymnastics, will be the next steps necessary.

By means of the new apparatus, a number of procedures were tested; more particularly, the skill of boxers, the strength of heavyweight athletes, and the mental states of sprinters and gymnasts. The purpose of all these tests is to secure extensive statistical material, which will have much greater value than any single person's investigations on a small scale.

Certain of the tests were worked out in detail, as examples indicative of what could be accomplished along this line; for instance, a test for the velocity of applied force, a test of skill in the use of the hands, a test of ability to make fine distinctions as to form, and also two types of general intelligence tests. All the tests and also the form of blank used in the psychologic researches on sport activities have been introduced in many places outside of Berlin.

A new series of touch tests to ascertain the power of concentration, the phenomena of fatigue and the capacity for various combinations is being published; likewise a schematic diagram to illustrate graphically the effect of training, which in sport as in daily life is of paramount importance. An explanatory booklet giving a number of simple psychologic tests on sport activities will appear later. The details of some of the tests; for instance, the test of the heart's action by certain special procedures, to determine what sports involving a strain on the heart may be entered into, have not been entirely worked out as yet. Tests on the effects of different methods of training have been begun. Measurement of the electric action-currents of the human body will be made possible by means of a highly sensitive apparatus. Courage, reaction to fear, presence of mind and resoluteness were determined in athletes and members of the *Schutzpolizei* by means of a new and thorough method of testing. Material on adroitness, dexterity and general intelligence was also secured and will be published later.

Death of Professor Löhlein

Professor Löhlein, director of the pathologic and anatomic institute in Marburg, died, December 28, at the age of 44, after a long illness, due to an infection contracted during the performance of professional duties. He was the son of the well known gynecologist, who formerly occupied the chair of gynecology in Marburg. Shortly before his death, Löhlein had been offered the chair of pathology rendered vacant by the transfer of Professor Mönckeberg to Bonn.

GUAYAQUIL

(From Our Regular Correspondent)

Dec. 15, 1921.

Women Physicians in Ecuador

A woman, Dr. Matilde Hidalgo, has just graduated from Quito University. Including her, three women have so far practiced medicine in Ecuador, the first of them studying in the old University del Guayas. In this connection, there is observed at present a feminine tendency in this country. In the University of Guayaquil, where there is a total of about 300 students, thirty of them are women. Another Ecuadorian woman has just received the degree of doctor of philosophy in an American university.

Preparation of Theses

At the request of Central University, the superior board of education is considering a bill requiring students, after completing their courses, to notify the authorities one year in advance of preparing their final theses, so that their theses may be prepared under the supervision of a professor. This

apparently aims at preventing an occurrence common in European universities, in which these papers are prepared in collaboration, a rich student with a poor one, etc. This practice has not so far extended to this country.

Medical Society Activities

The Sociedad Médico-Quirúrgica del Guayas has shown new life under the presidency of Dr. Fuentes Robles. Its *Anales* have appeared again, and brief mention is made in this journal of several of the papers presented before the society. Many of them dealt with tropical pathology, for instance a case of paragonimiasis, reported by Dr. Heinert, and a case of psilosis or sprue, of mycosic origin, by Dr. A. J. Valenzuela.

Another Congress

Ecuador has been invited to participate in the third pan-American congress on infant welfare, which will meet at Rio de Janeiro. A propaganda committee has been organized here, headed by Professor Izquieta Pérez.

Health Conditions

Aside from a small outbreak of whooping cough and another of mumps, Guayaquil is suffering from what old physicians call a "health epidemic," such as few can remember. The sanitation of the city and the reduction of yellow fever now show results in the increasing number of visits by tourists and merchant ships.

Personal

Dr. Romo Rosales has returned from the United States, where he completed his medical studies, and has opened his office here.——After attending the Washington Surgical Congress, where he represented Ecuador, Dr. Alcivar, professor of operative medicine, has returned to this country.——Dr. C. V. Coello of the United States Public Health Service, who attended the American public health conference meeting in New York, has also returned.

Gift to German Scientist

Because of the situation in which German scientists are at present, the Ecuadorian Congress has issued a law granting a monthly pension of 300 sucres, about 10,000 marks, to Theodore Wolf, one of the European scientists brought to this country by the former president, Garcia Moreno, to organize a polytechnic school. On his return to Germany, Wolf edited in Leipzig his monumental work "Geography and Geology of Ecuador," which, although deficient, is still in use by foreign geographers.

Marriages

HERBERT A. DURFEE, Burlington, Vt., to Miss Margaret Elizabeth Spaulding of Salem, N. Y., December 27.

FERDINAND WILLIAM WIEHE, St. Marys, Ohio, to Welma G. Baron of Hellam, Pa., November 22, at Denver.

LISLE BENJAMIN ROBINSON, Atlanta, Ga., to Miss Effie Mai Buchanan of Nashville, Tenn., December 28.

CYRUS B. WOOD, M. C., U. S. Army, to Mrs. Irene Nagel Pettey at Washington D. C., December 28.

CORNELIUS THEODORE MCCARTHY to Mrs. Rose McCormick Ferron, both of Philadelphia, December 21.

JAMES CARLISLE HARMON, McCormick, S. C., to Miss Ruth Richards of Bryn Mawr, Pa., December 22.

ERNEST U. BUCKMAN, Wilkes-Barre, Pa., to Miss Carrie L. Best of Quincy, Pa., December 28.

RAYMOND RAUSCHER, Lynn, Mass., to Miss Bertha Hoffman of Lynnfield, Mass., December 31.

LUCY LLOYD PASSOVER to Mr. Theodore Earle, both of Denver, January 4.

Deaths

Basil Hicks Dutcher ● Colonel, M. C., U. S. Army, Chevy Chase, Md.; Columbia University College of Physicians and Surgeons, New York City, 1895; died, January 16, after a long illness, at the Walter Reed Hospital, Washington, D. C. Colonel Dutcher was born in New Jersey, Dec. 3, 1871; graduated from the Army Medical School, 1897; was commissioned assistant surgeon with the rank of lieutenant, M. C., U. S. Army, October, 1896; lieutenant-colonel, July, 1916, and colonel, May, 1917; retired from active service, Jan. 28, 1920, on account of physical disability. During the World War Colonel Dutcher took a hospital unit to Plymouth, England, and later was in charge of a hospital at Brest, France; while on active duty he served in the Philippine Islands, Panama, Japan, Porto Rico and Arizona.

Heinrich Ferdinand Riedel, Brooklyn; University of Erlangen, Germany, 1862; formerly a surgeon in the Bavarian army; at one time resident physician of the Lenox Hill Hospital, Manhattan; for two years superintendent of the Emigrant Insane Asylum, Ward's Island; died, January 17, at the King's County Hospital, from pneumonia, aged 82.

Elam Filo Srygley, Newberry, Mich.; Vanderbilt University Medical Department, Nashville, Tenn., 1913; served in France during the World War; formerly on the staff of the New Jersey State Hospital, Greystone Park, N. J.; assistant superintendent of the Newberry State Hospital; died, January 11, from pneumonia, aged 31.

Phoebe Jane Teagarden, Waynesburg, Pa.; Woman's Medical College of Pennsylvania, Philadelphia, 1882; formerly president of the Greene County Medical Society; for twenty-five years president of the county Children's Aid Society; died, January 11, from cerebral hemorrhage, aged 80.

Joseph B. Miller, Alexander, N. Y.; University of Buffalo, 1866; member of the Medical Society of the State of New York; member of the county board of supervisors; physician to the Genesee County Alms House, Bethany; died, January 10, from chronic nephritis, aged 77.

William Henry Rodgers ● Pittsburgh; Jefferson Medical College, Philadelphia, 1903; Spanish-American War veteran; connected for many years with the Allegheny County Home and Hospital for the Insane, Woodville, died, January 13, from pneumonia, aged 44.

John Kurrus, New York City; Columbia University College of Physicians and Surgeons, New York City, 1899; formerly on the staff of the Harlem Eye, Ear and Throat Hospital, New York City; died suddenly, January 17, from heart disease, aged 56.

Edwin Randolph Barnes, Buffalo; Long Island College Hospital, Brooklyn, 1865; Civil War veteran; member of the Medical Society of the State of New York; formerly attending surgeon at the Buffalo General Hospital; died, January 11, aged 84.

John Cassell Rogers, Kansas City, Mo.; University of the City of New York, 1875; St. Louis Medical College, 1865; member of the Missouri State Medical Association; formerly county coroner; died, January 6, at the home of his daughter, aged 79.

James Thompson Walls, Portland, Ore.; Medical College of Ohio, Cincinnati, 1877; specialized in gynecology; member of the Oregon State Medical Association; died January 7, at the home of his son, Powers, Ore., from cerebral hemorrhage, aged 70.

Henry Meek, London, Ont., Canada; Trinity Medical College, Toronto, 1878; professor of gynecology and obstetrics, Western University Faculty of Medicine, London; formerly lecturer at the Victoria Hospital, London; died, January 13.

Louis T. Kennedy ● Pottsville, Pa.; Department of Medicine, University of Pennsylvania, Philadelphia, 1895; formerly pathologist and member of the medical staff of the Pottsville Hospital; died, January 12, from acute indigestion, aged 49.

Thomas Edmund Pigot, North Woburn, Mass.; Tufts College Medical School, Boston, 1897; for forty-two years employed by the American Telephone Company, New York City; died, January 7, from cerebral hemorrhage, aged 63.

Annie L. Miller, San Francisco; Homeopathic College for Women, Cleveland, 1869; practitioner for nearly half a century; died, December 29, following a brief illness, aged 94.

● Indicates "Fellow" of the American Medical Association.

Ward Beecher Whitcombe, Batavia, N. Y.; Medical Department of Columbia College, New York City, 1884; former health officer of Batavia; died, January 10, from septicemia, the result of a cut incurred while opening a can, aged 64.

Egbert Tilton Andrews ● Grey, Maine; College of Physicians and Surgeons in the City of New York (Columbia University), New York City, 1873; veteran of the Civil War; died, January 10, at Portland, Maine, aged 77.

Hugh W. Gates, Calhoun, Ky.; Vanderbilt University Medical Department, Nashville, Tenn., 1882; member of the Kentucky State Medical Association; county health officer; medical referee for the county; died, recently, aged 61.

Charles Van Cappellan, St. Paul; University of Brussels, Belgium, 1885; former county physician and poor commissioner; died, January 8, at the Eitel Hospital, Minneapolis, following an operation for goiter, aged 66.

Jesse Louis Gammons ● Yonkers, N. Y.; University of Vermont, Burlington, 1904; on the staff of the Municipal Tuberculosis Hospital; died, January 12, from heart disease at St. John's Riverside Hospital, aged 42.

William Simpson Hickman, Georgetown, Calif.; Vanderbilt University Medical Department, Nashville, Tenn., 1886; died, January 9, from heart disease at the White Hospital, Sacramento, Calif., aged 65.

Edwin Gilliam Booth, Williamsburg, Va.; University of Pennsylvania, Philadelphia, 1861; surgeon in the Confederate Navy during the Civil War; died, January 5, from senility, aged 82.

Giles Andrew Fike, Dundaff, Pa.; Jefferson Medical College, Philadelphia, 1876; died, January 6, at the Carbondale Emergency Hospital, Carbondale, Pa., from septicemia, aged 71.

Samuel Crayton Loring, Plymouth, Ind.; Rush Medical College, Chicago, 1886; member of the Indiana State Medical Association; died, January 3, from cerebral hemorrhage, aged 61.

Frank Bates Livermore, Barberton, Ohio; Cleveland University of Medicine and Surgery, Cleveland, 1895; died, January 17, from cerebral hemorrhage, in Youngstown, Ohio, aged 49.

Fletcher Drummond, Parksley, Va.; Jefferson Medical College, Philadelphia, 1869; member of the Medical Society of Virginia; died, January 11, following a short illness, aged 74.

Wade D. Stevens, Pawpaw, Ill.; College of Physicians and Surgeons, Chicago, 1894; died, recently, as the result of an overdose of a narcotic, apparently self-administered, aged 54.

James A. Melton, Aurora, Mo. (license, Missouri, 1883); member of the Missouri State Medical Association; died suddenly, January 8, from cerebral hemorrhage, aged 75.

John J. Thode, Walhalla, S. C. (years of practice); member of the South Carolina Medical Association; alderman of Walhalla; died, January 3, from pneumonia, aged 63.

William Spencer Russell ● Wallingford, Conn.; Yale University School of Medicine, New Haven, 1880; member of the state legislature, 1883-1884; died, January 9, aged 63.

Ernest A. Algoth, Chicago; Jenner Medical College, Chicago, 1916; member of the Illinois State Medical Society; was found dead in his office, January 23, aged 47.

Roland DuJardin, New York City; New York Homeopathic Medical College and Hospital, New York City, 1894; died, January 7, from pulmonary tuberculosis, aged 66.

Joseph Grant Morrissey, San Francisco; Medical Department University of California, San Francisco, 1894; died, January 13, from cerebral hemorrhage, aged 57.

B. R. Fakes, Asheville, N. C.; University of Nashville, Tenn., 1866; Confederate veteran; died, November 22, at the home of his son-in-law, from senility, aged 84.

Bailey Peyton Lester, Woodbury, Tenn.; Vanderbilt University Medical Department, Nashville, 1879; University of Nashville, 1882; died, January 5, aged 64.

Paul F. Von Scheliha, Philadelphia; Hahnemann Medical College and Hospital of Philadelphia, 1889; died January 18, at Llanerch, Pa., following a long illness.

Ansley Smith, Royal Oak, Mich.; Michigan College of Medicine, Detroit, 1884; health officer of Royal Oak; died, January 11, from heart disease, aged 66.

Frederick George Sparling, Bashaw, Atla., Canada; Rush Medical College, Chicago, 1895; died suddenly, January 5, in Minneapolis, from heart disease, aged 57.

Albert G. McLaurin, Brandon, Miss.; University of Nashville, Tenn., Medical Department, 1873; died, January 8, from cerebral hemorrhage, aged 71.

Edwin E. Campbell, Watertown, N. Y.; Chicago Homeopathic Medical College, Chicago, 1885; died, January 3, from cerebral hemorrhage, aged 65.

Eliab M. Jacobs, Manitowoc, Wis.; Hahnemann Medical College and Hospital of Chicago, 1895; died, January 11, from cerebral hemorrhage, aged 63.

John Dalgleish Campbell ● Pioche, Nev.; University of Michigan Medical School, Ann Arbor, 1878; died, January 8, in Salt Lake City, aged 68.

Stanton M. Fetzer, Shenandoah, Pa.; Jefferson Medical College, Philadelphia, 1884; died, January 12, at the Fountain Springs Hospital, aged 59.

Lycurgis Rogers, Negley, Ohio; State University of Iowa College of Medicine, Iowa City, 1893; died, January 9, from pleuropneumonia, aged 69.

Charles Thacher Hubbard, Taunton, Mass.; Medical School of Harvard University, Boston, 1861; Civil War veteran; died, January 16, aged 81.

Burney J. Kendall, Geneva, Ill.; University of Vermont College of Medicine, Burlington, 1868; died, January 11, from angina pectoris, aged 76.

John William Pancoast, Philadelphia; University of Pennsylvania, Philadelphia, 1892; died suddenly, January 4, from heart disease, aged 52.

John Henry Sparling, Boston; University of Manitoba, Faculty of Medicine, Winnipeg, 1891; died, January 5, from heart disease, aged 59.

Benton Houston Criley, Los Angeles; Jefferson Medical College, Philadelphia, 1871; died, January 10, from cerebral hemorrhage, aged 71.

Frank F. Grady, North Yakima, Wash.; Chicago Medical College, Chicago, 1888; died, December 26, from cerebral hemorrhage, aged 64.

Jacob Danford Sherrick, Seattle; University of Michigan, Ann Arbor, 1877; also a druggist; died, December 8, from pneumonia, aged 70.

Lucius Ely Felton, Hanford, Calif.; Bellevue Hospital Medical College, New York City, 1871; died, January 8, from pneumonia, aged 72.

Gregory Delaney, Emden, Mo.; Missouri Medical College, St. Louis, 1896; died, January 2, from carcinoma of the stomach, aged 71.

Robert Haslett Bullard ● Tridelphia, W. Va.; Medical College of Ohio, Cincinnati, 1877; died, January 11, at Oakmont, W. Va., aged 70.

Peery Jackson Muncy, Ferrum, Va.; Medical College of Virginia, Richmond, 1917; died, December 8, from pneumonia, aged 32.

John E. Perry, Wakefield, R. I.; Medical Department of Columbia College, New York City, 1873; died, January 5, aged 74.

James Davis Biggs, Greenup, Ky.; Kentucky School of Medicine, Louisville, 1893; died, January 10, at Oliver, Ky., aged 49.

William C. Sibley, Fairfield, Ill.; St. Louis College of Physicians and Surgeons, St. Louis, 1891; died, January 10, aged 64.

Albert Jasper Murdock, Minneapolis; Medical Department of Columbia College, New York City, 1870; died, January 4, aged 74.

John Ashworth Standring, El Paso, Texas; Denver College of Medicine, Denver, 1899; died, January 1, aged 54.

James Shearer McCartney, Pittsburgh; Jefferson Medical College, 1856; died, January 3, from pneumonia, aged 89.

P. M. Bilby, Eldon, Iowa; College of Physicians and Surgeons, Keokuk, Iowa, 1871; died, December 15, aged 78.

William H. Betts, San Antonio, Texas; Fort Wayne (Ind.) College of Medicine, 1880; died, December 19, aged 90.

Harry C. Lessig, Rainsburg, Pa.; Jefferson Medical College, Philadelphia, 1878; died, January 12, aged 70.

James L. O'Neal, Bradley, Ark. (license, Arkansas, 1903); died, January 9, from cerebral hemorrhage, aged 57.

James Shelbourne Ewing, Jonesville, Va.; Louisville (Ky.) Medical College, 1903; died, January 6, aged 46.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER GENERAL MATERIAL OF AN INFORMATIVE NATURE

WILLARD EALON OGDEN

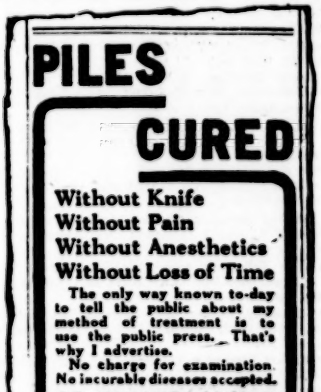
A "Specialist in Proctology" and His "Clinics"

Within the past few weeks a number of inquiries have reached THE JOURNAL from physicians in Ohio, Indiana and Pennsylvania. Those that follow are typical:

"I am in receipt of literature from H. L. Roberts, 1126 Masonic Temple, Chicago, advertising a clinic in Cleveland by Dr. Willard E. Ogden who claims to be a member of the Chicago Medical Society and the A. M. A. What can you say of this man and his methods?"

"I am enclosing a folder received a short time ago. I would be glad to know if Dr. Ogden is a member of the A. M. A. as he claims to be."

"The enclosed folder has been sent to many doctors in Indiana. The purpose is plain. The attached post card on this one was returned to him for further literature."



Photographic reproduction of one of Ogden advertisements in Chicago newspapers at the time he was at 36 W. Randolph Street.

In each case the correspondents send in a four-page folder bearing the title "Proctology, A Clinic. Who? Where? Why?" Three of the four pages purport to answer the interrogations given on the title page. Under "Who?" we read:

DR. WILLARD E. OGDEN
Chicago, Ill.
SPECIALIST IN PROCTOLOGY
Member Chicago Medical Society and A. M. A.
Author of "Improved Method of Treating Rectal Diseases"
Formerly associated with Drs. Burleson & Burleson,
Grand Rapids, Mich.

Under the question "Where?" there appears the statement that "Dr. Ogden Will Hold a Clinic for The Treatment of Rectal Diseases" and the name of the city and the dates of the "clinic" are inserted with a typewriter.

Under "Why?" we read:

"Dr. Ogden does not use the usual surgical methods. His many years of experience in the treatment of Rectal Diseases (during which time he has been associated with the leading Proctologists of America) have enabled him to develope a system of office treatment *which is not taught by any other practitioner.*

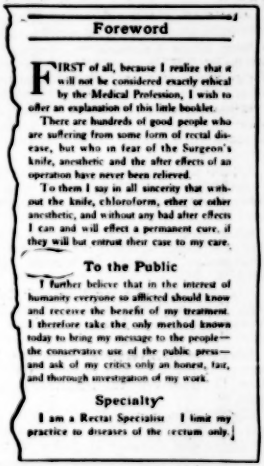
"Tear off, sign and mail attached post card and I will send you a booklet giving you full particulars as to the course.

Yours truly,
H. L. ROBERTS, Business Manager.

"Eighty-three per cent. of the people have some Rectal trouble. THIS IS THE DAY OF SPECIALISTS. Why not fit yourself to specialize in Proctology?"

The fourth page is a post card addressed to "H. L. Roberts, Room 1126, Masonic Temple, Chicago." On the reverse side there is a printed statement which the recipient is expected to sign to the effect that he is interested in "Dr. Ogden's Clinic" and wishes to have "full particulars of the course."

A visit to Room 1126, Masonic Temple, failed to disclose the name of H. L. Roberts, either on the door (or doors, for there are two rooms having this number) or on the office building directory board. In fact, Rooms 1126 seem to contain a somewhat miscellaneous assortment. The signs, either on the door or on the directory board, show that there is a public stenographer (who operates a "Mailing Service," and does "Addressing, Mailing, Multigraphing, Mimeographing"), a bookstore, a chocolate company, a publishing company, a lumber company, and one or two other concerns; but the name of "H. L. Roberts" does not appear. Incidentally, no "H. L. Roberts" is to be found listed in the Chicago telephone directory.


Foreword

FIRST of all, because I realize that it will not be considered exactly ethical by the Medical Profession, I wish to offer an explanation of this little booklet.

There are hundreds of good people who are suffering from some form of rectal disease, but who in fear of the Surgeon's knife, anesthetic and the after effects of an operation have never been relieved.

To them I say in all sincerity that without the knife, chloroform, ether or other anesthetic, and without any bad after effects I can and will effect a permanent cure, if they will but entrust their case to my care.

To the Public

I further believe that in the interest of humanity everyone so afflicted should know and receive the benefit of my treatment. I therefore take the only method known today to bring my message to the people—the conservative use of the public press—and ask of my critics only an honest, fair, and thorough investigation of my work.

Specialty

I am a Rectal Specialist. I limit my practice to diseases of the rectum only.

Photographic reproduction (reduced) of the first page of a booklet Ogden was sending out in the latter part of 1914.

A few yards away from Rooms 1126 and on the same floor there appears the name, "Dr. Willard E. Ogden" on Room 1102.

According to our records, Willard Ealon Ogden was born in 1866. Before taking up the study of medicine he seems to have been a preacher. In 1899 he was graduated by the Saginaw Valley Medical College, Saginaw, Mich. He was licensed in Michigan in 1900, in Illinois and Indiana in 1913, and in Wisconsin in 1921. From 1900 until 1904 he practiced in Lyons, Mich.; from 1906 until 1911 he was at Ionia, Mich.

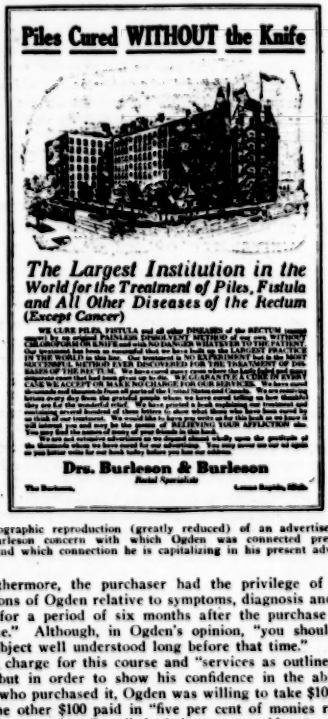
In 1911, he was in Grand Rapids, Mich., and was associated with Burleson and Burleson, an advertising pile cure concern. From some of the voluminous Burleson advertising on file, we learn that they "cure all diseases of the rectum (except cancer)"; and claim to have "the most successful method ever discovered," and to have cured "many desperate cases that have been given up to die." Furthermore, they "guarantee to cure in every case or make no charge."

On Jan. 1, 1914, Ogden was sending out a card to physicians in which he stated that he had removed from Grand Rapids, Mich., and LaPorte, Ind., to 36 W. Randolph St., Chicago, and that he would limit himself "exclusively to the treatment of diseases of the rectum." Later, Ogden was sending out an advertising booklet filled with testimonials.

In 1914, Ogden was carrying display advertisements in Chicago papers reading, in part, in large black-faced type: "Piles Cured Absolutely Without Knife, Anesthetics, Pain or Loss of Time. . . . Cure Guaranteed or Money Refunded."

In March, 1918, he became a member of the Chicago Medical Society and qualified for Fellowship in the American Medical Association, August, 1918.

In 1921, Ogden had a copyrighted mail-order course on the "Treatment of Rectal Diseases by Improved Method." This "course" consisted of thirty-eight pages of foolscap printed on one side in imitation typewriting. The material abounded in typographical errors. Among the proprietary products recommended in this "course" as "essential" to those taking it, was "Mecca Ointment." This nostrum, made by a Chicago concern, was declared misbranded in 1916 because of false and fraudulent claims made knowingly, recklessly and wantonly. The "course" was divided into ten parts, and with it, apparently, came ten consecutively numbered sealed envelops, and the purchaser was instructed to open these envelops, one at a time, as he completed the corresponding part in the "course." He would there find questions which were to be answered and returned to Ogden. This, according to the description, was to enable Ogden to determine whether it was necessary to "enter more into detail upon that particular subject," which, he stated, he would gladly do if necessary.



Photographic reproduction (greatly reduced) of an advertisement of the Burleson concern with which Ogden was connected previous to 1914, and which connection he is capitalizing in his present advertising.

Furthermore, the purchaser had the privilege of asking questions of Ogden relative to symptoms, diagnosis and treatment for a period of six months after the purchase of the "course." Although, in Ogden's opinion, "you should have the subject well understood long before that time."

The charge for this course and "services as outlined" was $200, but in order to show his confidence in the ability of those who purchased it, Ogden was willing to take $100 down and the other $100 paid in "five per cent of monies received from CURED patients" until the balance was paid.

Reverting to the present "post-graduate course" and "clinic": Those who send in the postal card to "H. L. Roberts" receive a form-letter, signed "H. L. Roberts" in facsimile handwriting, stating that information was enclosed "regarding THE OGDEN METHODS" and stating that Dr. Ogden would be in Indianapolis or Cleveland or Pittsburgh, as the case might be, on a certain date and that the fee for the "clinic" would be $100. With this letter is an eight-page pamphlet entitled "Some Facts Concerning the Ogden Method of Treating Rectal Diseases." The first page is headed in black-faced type: "About References and Endorsements." It then states that the "usual references and endorsements are omitted from this booklet." Further:

> "As to Dr. Willard E. Ogden: The professional and social standing of Dr. Ogden is such that he does not need to offer any.
>
> "As to 'THE OGDEN METHOD' and its value to you in your professional work: What others say or think has little if any weight. You are your own man. You do your own thinking. You decide for yourself—Do you not?"

The booklet gives an outline of the "Course of Instruction," which is almost identical, word for word, with the outline given in the letter advertising the mail-order course previously referred to.

The booklet further states that "THE OGDEN METHOD has entirely eliminated the use of cautery, the ligature or any injections, in the treatment of hemorrhoids," but that "the use of the electric current has proved to be the very correct method in such cases, as will be demonstrated at the clinic." The booklet reiterates the statement that Ogden's association with the Burleson and Burleson concern at Grand Rapids makes him "eminently well qualified to instruct members of the medical profession in this important branch of the medical science"!

In addition to this booklet there is a four-page advertising leaflet illustrating and describing the "Ogden Rectal Cabinet" and also the "Ogden Rectal Table and Stool." There is also a little postcard—addressed, of course, to "H. L. Roberts"—for the physician to fill in stating that "you may enroll me as intending to attend Dr. Ogden's Clinic in Proctology, to be held at ————." Should the recipient not fill in and mail this enrolment card he gets another form letter calling attention to the fact that the enrolment card has not been received and stating further that "available hotel facilities make it necessary to limit our enrolment to twenty students."

Careful search fails to disclose that Dr. Willard Ealon Ogden has ever distinguished himself in the practice of the specialty in which he now wishes to instruct physicians. Equally careful search fails to show that Dr. Ogden has ever published a paper either on any proctologic subjects or on any other phase of medicine or surgery. Neither does there seem to be any evidence for the claim that Dr. Ogden "has been associated with the leading Proctologists of America."

Correspondence

THE ADAPTATION OF INFANT WELFARE WORK TO PRIVATE PRACTICE

To the Editor:—The present era is witnessing an intensification of the ideas of preventive medicine. Always greater in idealism than their contemporaries, physicians have felt their responsibility—not only that personal responsibility to fellow members felt by the craftsman or the merchant to his particular association, but also a sense of responsibility and obligation to the community at large. Every medical discovery of possible practical value to humanity made by a physician has been made available to both the public and the medical profession gratis. The technic of this transfer has usually been by means of the "board of health." When the typhoid bacillus was sufficiently correlated to typhoid fever, the state established methods of milk, food and water inspection. A study of the tubercle bacillus has led to the establishment of municipal and state dispensaries and sanatoriums. Elaboration of our knowledge of contagious disease leads to constantly changing laws of quarantine. The dependence of pellagra and beriberi on food developed a new dietary code, and more recently the practicability of toxin-antitoxin mixture has led to its adoption by various municipal agencies. It would seem that as soon as the medical profession has so perfected a study as to make feasible its application on a broad scale, this function has been assumed by the state.

Undoubtedly, with every increase in the power of the public health department, a number of physicians have sensed danger to their profession and, from loyalty to their own, have voiced protest. But in every case a group more altruistic, feeling deeper responsibility to the entire community, has advocated the change. In every instance this has come.

During these developments, however, the medical profession has never really suffered. It has protected its own interests by offering much the same service as that of the state. Owing to political conditions, a mass of the public prefers the services of a private physician even in preventive work, while those less fortunate financially are cared for at public expense.

Until recently, preventive medicine has been mainly concerned with the control of infectious disease. Such problems as infant feeding were too complex and too unsettled to be feasible for organized effort; but the individual study and enthusiasm of the last ten years has revolutionized and decidedly simplified the principles of infant feeding. Diarrheas of obscure and baffling origin, ascribed to every possible hypothetic cause, are now placed as simple dietary failures, too much carbohydrate, too little carbohydrate, lack of vitamin, or improper balance between food constituents. Infant feeding becomes relatively simple. With the newer technic, privately endowed infant welfare societies working in a spirit of preventive medicine have shown it practicable to direct the diets of large groups of infants, to keep them happy, healthy and thriving, and to decrease infant mortality by incredible figures. No sooner had this been demonstrated than the state grasped the idea and municipal welfare stations entered the field. Private enterprise is now developing the field of cardiac clinics, and schools are established especially for these patients.

This idea is spreading to the care of adults, and in a rather vague, indefinite way come rumors of health centers and other propaganda for preserving the health of the adult and his ability to work. The state is as yet far from adopting practical measures along these lines. It would seem reasonable to assume that the idea must first be proved practicable by groups of physicians in private practice. But already another struggle is on. Opponents loyal to the medical profession denounce such tendencies. Their ideals of citizenship rest temporarily on the shelf. Proponents with broader points of view favor another great medical sacrifice so as to bring about intervention for those unfortunates who must pay for efficient service by starvation, and who pay for inefficient skill by suffering and neglect.

Though these ideas have not yet crystallized, the germ is here. If in time to come the public makes such a demand, this demand will be granted. Physicians as a profession or by individual effort may stem the tide, but a democracy will always heed the call of 700 to one.

Is not the time ripe for the physician to look to the future? Must these ideas be thrust on the profession, or will it as in the past be a leader and educator of the layman? Why not give private patients the same benefit as will be offered by the state? Why not offer one's skill and experience not only for the cure of disease but also for its prevention? The public is not blind to such possibilities. The farmer gladly employs means for preserving the health of his cattle and hogs. Corporations employ high salaried attorneys to prevent lawsuits. Every adult goes periodically to the dentist. Why not offer *preventive* medical service to our patients.

Of all specialties, pediatrics has seized the idea most vigorously. Much of the activity of the modern pediatrician is devoted to keeping his little patient well. In introducing such ideas the physician finds enthusiastic cooperation. The mother is delighted in an interest which attempts to preserve her child's health. She gladly consents to routine examinations that aim at prophylaxis. She is well satisfied to understand that orange juice, cod liver oil, phosphorus, calcium and iron are given at various times with a view of preventing disturbances rather than of curing them. Indeed, this idea, first conceived with regard to the nutritional disturbances, meets with such a welcome that by one's own practice one is almost forced into other fields. Smallpox vaccination, of course, is not new. The recent health department propaganda has resulted in a bombardment of questions as to the advisability of giving toxin-antitoxin mixture. Typhoid vaccination is well established. Mothers literally insist on prophylactic injections of pertussis vaccine in spite of the warning as to its doubtful efficacy.

Granted examinations at stated intervals, routine supervision of the diet, and prophylactic procedures as regards infectious disease, a children's practice becomes a source of great satisfaction and pleasure. Such work is the finest feature of the day's duties.

Is not the time ripe for the general practitioner to offer in an organized way some such service to adults? Such a slight adaptation to the demands of the present would mean much to the general public and to the physician as well. One might truly feel that he was entering a new era. "State medicine" might grow in influence and no cloud darken the medical horizon. The altruistic activities of the physician would be compatible with professional livelihood. He himself would prosper in attempting to actualize his abstract dreams. Medical ideals harmonizing with medical prosperity would thrive in an atmosphere of health and happiness.

JESSE R. GERSTLEY, M.D., Chicago.

THE MICHIGAN STATE MEDICAL SOCIETY AND THE MEDICAL SCHOOL OF THE UNIVERSITY OF MICHIGAN

To the Editor:—During the past years, and especially through this last year, rumors and misstatements have appeared in the medical as well as the lay press. They were concerned with compulsory health insurance, "state medicine," socialization of medicine, administrative policies of the Medical School of the University of Michigan, and the antagonism of the medical profession of Michigan.

Jan. 11, 1922, in Detroit, the council of the Michigan State Medical Society, and President Burton and a committee of the University of Michigan met in conference. As a result of that conference, we desire to make the following announcements to the profession and public of this country over our signatures:

1. A basis of mutual understanding has been reached, and past apparent differences have been obliterated.

2. The university and its medical school are not in favor of "state medicine," so called, nor do they indorse or subscribe to those policies or movements that have for their object the establishment of any such forms for the practice of medicine.

3. Dr. Hugh Cabot, dean of the medical school, has been and is opposed to "state medicine," so called. He desires his opposition to be known to the entire profession, and that in the past he has been unjustly accused of being favorable to that type of socialization of medical practice.

4. In response to the invitations of the president and council of the Michigan Medical Society, the University of Michigan, through its extension division and medical school, has expressed its desire and readiness to educate the public in regard to scientific medicine and the benefits to be derived therefrom.

5. The medical school is concerned chiefly with the education of students in scientific medicine, with the promotion of

medical research, and with cooperation with the profession in the advancement of scientific medicine in Michigan.

To these ends have we pledged ourselves and through duly appointed representatives we propose to enter into a campaign of concerted and cooperative activity. Coincident with this action, we believe that the profession at large should be acquainted with our avowed attitude. We therefore issue this statement at this time for the explicit purpose of discrediting false assertions of the past and to make clear for the future the policies and purposes of the principals concerned in this announcement.

THE MICHIGAN STATE MEDICAL SOCIETY:
W. J. KAY, President,
W. J. DU BOISE, Chairman of the Council.

THE UNIVERSITY OF MICHIGAN:
MARION L. BURTON, President,
HUGH CABOT, Dean of the Medical School.

"CIRCUMCISION PREVENTS SYPHILIS"

To the Editor:—In THE JOURNAL, Aug. 27, 1921, appears an abstract of an article in the *Virginia Medical Monthly* by Irvine, who asserts that nation wide circumcision would practically stamp out syphilis in a few years. I have not seen the article itself so that I do not know what arguments the author adduces; but if his claim is true, it would follow that syphilis should be very rare among Mohammedans and Jews, both of whom practice circumcision as a religious rite. What the statistics of syphilis among Jews in America is compared with other races I do not know; but the disease is frightfully common in Persia among both Mohammedans and Jews. The impression derived from ten years of practice of medicine in Persia is that syphilis is much more in evidence than in America, and that its incidence is steadily and rapidly increasing. As practically all the male population of Persia is circumcised, this evidence would seem to disprove the value of circumcision as a prophylactic measure.

M. A. ZOECKLER, M.D., Daulatabad, Malayir, Persia.

"THE MODE OF PRODUCTION OF THE SO-CALLED VESICULAR MURMUR OF RESPIRATION"

To the Editor:—I have read with much interest Dr. Bushnell's article on vesicular murmur (THE JOURNAL, Dec. 31, 1921, p. 2104), and it would seem to me that his conclusion that the sound of inspiration arises or originates in the larynx from a common sense standpoint is not well founded.

If we are to assume that the normal murmur arises in the larynx during inspiration, why should we not be warranted in also assuming that bronchovesicular breathing and even sonorous râles originate in the same manner? This assumption would upset our present interpretation of physical signs.

H. F. GAMMONS, M.D., Dallas, Texas.

[This letter was referred to Dr. Bushnell, who replies:]

The difficulties will, I think, be removed if it is noted that I say that the breath sounds *originate* in the larynx. My paper states distinctly that the sounds of vesicular and of bronchial breathing, *as we hear them over the thorax*, owe their characteristics to the thorax and to the bronchi, respectively. But these air-spaces function as resonators and, like other resonators, do not originate sound; they reinforce existing sounds of proper pitch. Therefore, when the larynx is silent the thorax also is silent. It is only in this way that we can reconcile two facts: first, the undoubted fact that the vesicular murmur has been heard under conditions in which the vocal cords are excluded; second, the fact, which I consider to be established, that when the glottis is opened widely enough the vesicular murmur disappears. While this view throws a very different light on the mode of production of both normal and abnormal breath sounds, I do not see that it affects materially the interpretation of physical signs. The vesicular murmur, as we hear it, is still caused by the vibrations of the air within the pulmonary alveoli, and the sounds of bronchial breathing are still produced in the bronchi.

I have, of course, no belief that the larynx has any part in the production of sonorous, or other, râles.

G. E. BUSHNELL, M.D., Bedford, Mass.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

VIBRATIONS OF MUSICAL TONES

To the Editor:—Please inform me as to the number of double vibrations per second for the octave of musical tones as listed: c^3 (512 d. v.), $c^{\sharp 3}$ sharp, d^3, $d^{\sharp 3}$ sharp, e^3, f^3, $f^{\sharp 3}$ sharp, g^3, $g^{\sharp 3}$ sharp, a^3, $a^{\sharp 3}$ sharp, b^3, c^4 (1,024 d. v.).

J. N. STOOPS, M.D., and R. P. STOOPS, M.D., Scottsbluff, Neb.

ANSWER.—The vibrations of musical sounds are of particular interest to otologists. The number of double vibrations per second in the octave mentioned are:

	Equally Tempered	Physical
c^3	512	512
$c^{\sharp 3}$	542.4 +	533.3 +
d^3	574.2 +	576.0
$d^{\sharp 3}$	608.9 —	600.0
e^3	645.1 —	640.0
f^3	683.5 —	682.7
$f^{\sharp 3}$	724.1 —	711.1 +
g^3	767.1 —	768.0
$g^{\sharp 3}$	812.7 —	800.1
a^3	861.9 —	853.3
$a^{\sharp 3}$	912.3 —	888.9 —
b^3	966.5 —	960.0
c^4	1,024	1,024

The ratios of the notes of the major diatonic scale are, with respect to the keynote: 1, $\frac{9}{8}$, $\frac{5}{4}$, $\frac{4}{3}$, $\frac{3}{2}$, $\frac{5}{3}$, $\frac{15}{8}$, 2. By multiplying the vibrations per second of the keynote by these ratios, respectively, the vibrations per second may be obtained for each of the notes of such scale. This is the exact physical scale. In order to obtain the vibrations per second of the sharp of any note, multiply by $\frac{25}{24}$. In order to obtain the vibrations per second of the flat of any note, multiply by $\frac{24}{25}$. The sharp of c^3 and the flat of d^3 do not agree, and therefore in order to make a keyboard which it was possible to use, a scale called the "equally tempered scale" was invented and is now used in virtually all music.

In order to obtain the vibrations per second of any note on the piano, multiply the vibrations per second of the preceding note by $\sqrt[12]{2}$. This applies for the complete chromatic scale. However, the pitch 512 vibrations per second is not used on the piano. International pitch uses 517.12. Assuming 512 to be correct, the other values are given above.

ACETIC ETHER AS A PEDICULICIDE

To the Editor:—Please summarize briefly the "Safe and Quick Acetic Ether Method of Getting Rid of Head Lice," as recommended by Dr. Walter Schnell in the *Deutsche medizinische Wochenschrift* 47:1254 (Oct. 20) 1921, and mentioned in THE JOURNAL, Jan. 7, 1922, p. 76.

FRANCIS SCHILL, JR., M.D., Johnstown, Pa.

ANSWER.—For the application of acetic ether (ethyl acetate) to rid a subject of head lice, Schnell recommends a special type of hood, which, while fitting the head tightly at the outer border, so as to prevent the escape of vapors, has a roomy crown with sufficient space for the hair to hang loose, thus permitting the fumes of ethyl acetate to penetrate to all parts of the head. On a thin layer of absorbent material (artificial cellulose), from 5 to 10 c.c. of ethyl acetate is distributed as evenly as possible over the hairy scalp, whereupon the hood is immediately applied and drawn tight across the forehead by a band of porous material within the hood and tied behind the head, while another band beneath the chin secures the lower portion. The lice are usually all killed at

the end of fifteen minutes, but it is safer to leave the hood on for thirty minutes. As a rule, the nits are also killed by one application, but it is not superfluous to give a second application after an interval of a week, when any nits that may have escaped will have hatched out. He warns that in the presence of a perforated tympanic membrane, the ears should be protected by rubber stoppers. When the treatment is given by laymen, it is well that this precaution be always taken.

STAINING AND EXAMINATION METHODS FOR GONOCOCCI AND SPIROCHETES

To the Editor:—1. Please give a formula of a satisfactory staining solution for microscopic examination of gonorrheal smears; a solution that can be kept on hand for some time in a physician's office without the solution undergoing deterioration, or only slight deterioration that will not affect the staining of the gonococci.

2. Outline the steps to get the best results in staining and examination of gonorrheal smears.

3. Give a brief outline of procedure in the microscopic examination with the dark field illuminator for *Spirochaeta pallida*.

4. Is the dark field on direct examination for the spirochete superior to any of the staining methods for the same germ? J. J., Iowa.

ANSWER.—1. Loeffler's alkaline methylene blue solution is a good single stain and improves on standing. Thirty cubic centimeters of saturated alcoholic solution of methylene blue is added to 100 c.c. of a 1:10,000 aqueous solution of potassium hydroxid.

2. The smears should be thin and taken carefully from the foci that are suspected to be the seat of infection. Any standard laboratory manual may be consulted for the steps in staining and for the directions for Gram's stain, which should be used also.

3. The lesion is cleaned with gauze and water to remove the superficial purulent material, and a drop of serum is squeezed from the depth of the sore and examined in the dark field. If antiseptics have been used on the lesion, a dressing of physiologic sodium chlorid solution should be applied for twenty-four hours, when a dark field examination may be made, or a drop of fluid may be withdrawn from the swollen inguinal or regional glands and examined.

4. The dark field method is superior to any staining method.

TESTS OF LIVER FUNCTION (DEDICHEN; KINBERG)

To the Editor:—What are the (1) gelatin and glycocoll test of liver function of Dedichen and (2) the provocative amino-aciduria test of Kinberg? Where can I read details of them?

CHARLES A. PANNETT, London, England.

ANSWER.—1. Dedichen maintained that urobilinuria is a sign of absolute insufficiency of the liver, and devised a test to detect urobilin in the feces and urine. Tincture of iodin is added, drop by drop, to the material to be tested, and then an equal amount of Schlesinger's reagent. Immediate filtration is done. If urobilin is present, fluorescence takes place. The test is described fully by Dedichen in the *Norsk Magazin for Lægevidenskaben* **78**:124 (Nov.) 1917.

2. In his tests of the functional capacity of the liver, Kinberg used gelatin instead of glycocoll. After a constant test diet with low nitrogen content for several days, 50 gm. of gelatin dissolved in hot chocolate is taken fasting. In case of liver disease there is an increase in the output of amino-acids, except in catarrhal jaundice and congestion of the liver. Kinberg described his test fully in *Hygiea* **81**:689 (Aug. 31) 1919.

HANDBOOKS ON CLINICAL MICROSCOPY AND ON MUNICIPAL PUBLIC HEALTH WORK

To the Editor:—Please give me the names of one or two good handbooks or compends on clinical microscopy that may be used by practitioners for clinical office work and for reference, and the names of two or three handbooks on municipal public health work.

THOMAS W. RHODES, M.D., East Liverpool, Ohio.

ANSWER.—

Webster's Diagnostic Methods, P. Blakiston's Son & Co., 1012 Walnut Street, Philadelphia.

Emerson: Clinical Diagnosis, J. B. Lippincott Company, Washington Square, Philadelphia.

Mallory and Wright: Handbook of Pathological Technique, W. B. Saunders Company, West Washington Square, Philadelphia.

Overton and Denno: The Health Officer, W. B. Saunders Company, Philadelphia.

Rosenau: Preventive Medicine and Hygiene, D. Appleton & Co., 20-25 West Thirty-Second Street, New York.

Park: Hygiene, Lea & Febiger, 706 Sansom Street, Philadelphia.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ALASKA: Juneau, March 7. Sec., Dr. Harry C. De Vighne, Juneau.

CALIFORNIA: Los Angeles, Feb. 13-16. Sec., Dr. Charles B. Pinkham, 342 Flood Bldg., San Francisco.

CONNECTICUT: Hartford, March 14-15. Sec., Reg. Bd. Dr. Robert L. Rowley, 79 Elm St., Hartford.

CONNECTICUT: New Haven, March 14. Sec., Eclec. Bd., Dr. James E. Hair, 730 State St., Bridgeport. Sec., Homeo. Bd., Dr. Edwin C. M. Hall, 82 Grand Ave., New Haven.

KANSAS: Topeka, Feb. 14. Sec., Dr. Albert S. Ross, Sabetha.

MAINE: Portland, March 14-15. Sec., Dr. Frank W. Searle, 775 Congress St., Portland.

MASSACHUSETTS: Boston, March 14-16. Sec., Dr. Samuel H. Calderwood, State House, Boston.

NATIONAL BOARD OF MEDICAL EXAMINERS. Written examination in Class A medical schools, Part I, Feb. 15-17; Part II, Feb. 20-21. Sec., Dr. John S. Rodman, 1310 Medical Arts Bldg., Philadelphia.

NEW HAMPSHIRE: Concord, March 9-10. Sec., Dr. Charles Duncan, Concord.

VERMONT: Burlington, Feb. 14. Sec., Dr. W. Scott Nay, Underhill.

WYOMING: Cheyenne, Feb. 13-15. Sec., Dr. J. D. Shingle, 206 Citizens Bank Bldg., Cheyenne.

California June Examination

Dr. Charles B. Pinkham, secretary, California State Board of Medical Examiners, reports the oral and written examination held at San Francisco, June 27-30, 1921. The examination covered 9 subjects and included 90 questions. An average of 75 per cent. was required to pass. Of the 133 candidates who took the physicians' and surgeons' examination, 118, including 11 osteopaths, passed, and 15, including 4 osteopaths, failed. One candidate was licensed to practice as a chiropractor. Of the 12 candidates who took the examination for chiropody, 11 passed and 1 failed. Of the 17 candidates who took the drugless practitioners' examination, 16 passed and 1 failed. Two candidates were licensed to practice midwifery. One hundred and sixty-two candidates were licensed by reciprocity. Seven candidates were licensed on government credentials. Three candidates received osteopathic certificates by reciprocity and 5 candidates received drugless certificates by reciprocity. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
College of Medical Evangelists	(1921) 82.1, 82.8, 83.3, 83.4, 84.2, 85.4, 86, 86.7, 86.9, 87.2, 87.3, 88.4, 89.3, 89.6, 90.3	80.4,
College of Physicians and Surgeons, Los Angeles	(1918) (1921) 75.7, 77.6, 77.9, 79.9, 80.2, 80.4, 81.2, 82.6, 82.7, 85.2, 86, 86, 86.6, 86.9, 86.9	75.4,
College of Physicians and Surgeons, San Francisco	(1921) 76.6, 82.3, 82.4, 85.3	75,
Leland Stanford Junior University	(1921) 83.6, 85, 85.1, 85.9, 86.3, 86.4, 88.1, 88.9, 88.9, 94.4	82.7,
Oakland College of Medicine and Surgery	(1920)	84.7
University of California	(1920) (1921) 75.8, 81.7, 83.3, 83.6, 83.7, 84, 84.1, 84.5, 84.6, 85.2, 85.3, 85.4, 85.6, 86.2, 86.3, 86.3, 86.6, 86.9, 87.1, 87.3, 87.8, 87.9, 88, 88.1, 88.1, 88.4, 89, 89, 91.8.	81.3,
Northwestern University	(1917) 89.5, (1920) (1921) 83.4, 85.7	87.2,
Rush Medical College	(1920) 80.9, (1921) 80.7,	87, 87.6
Indiana University	(1917)	80.4
State University of Iowa College of Medicine	(1920)	80, 88.3
Johns Hopkins University	(1916) 83.1, (1919) 79.3, (1920)	88.2
St. Louis University School of Medicine	(1920) 87.9, (1921)	90.1
Cornell University	(1920)	86.4
University of Oregon	(1921)	84.7
Jefferson Medical College	(1919)	85.1
University of Pennsylvania	(1919) 75, (1920)	91.3
Vanderbilt University	(1921)	80.8
University of Texas	(1917) 83.6, (1920)	82.8
Queen's University	(1912)	87.1
University of Palermo	(1913)*	76.6
School of Medicine and Pharmacy of Jalisco	(1912)*	78.1
University of St. Vladimira	(1915)*	77.3
Osteopaths	75, 75, 75, 75.5, 79.1, 80.3, 82, 84, 85.2,	88.4†
FAILED		
College of Physicians and Surgeons, San Francisco	(1918)	68
State University of Iowa College of Medicine	(1901)	30
Minneapolis College of Physicians and Surgeons	(1890)	67
St. Louis College of Physicians and Surgeons	(1888)	43
Washington University	(1903)	58
University of Buffalo	(1920)	72.1
Meharry Medical College	(1893)	51
University of Nashville	(1899)	61
Aichi Prefecture Special Medical School	(1908)*	59.2

Kyushu Imperial University, Fukuoka	(1913)*	62.9
Escuela de Medicina, Oaxaca	(1908)*	61.3
Osteopaths	40, 44, 69.5, 70	

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
University of Arkansas		(1915)	Arkansas
Denver College of Physicians and Surgeons		(1909)	Colorado
University of Colorado		(1911)	Idaho
Georgetown University		(1904)	Idaho
Howard University		(1909)	S. Carolina
Emory University		(1920, 2)	Georgia
American Medical Missionary College (1905) Michigan		(1900)	Montana
Bennett Medical College		(1914)	Illinois
Chicago College of Medicine and Surgery (1913, 3), (1914, 2) Illinois, (1915) Utah, (1917) Illinois		(1910)	Wisconsin
Chicago Homeopathic Medical College		(1902)	Montana
College of Physicians and Surgeons, Chicago (1904) Iowa, (1905), (1906) Illinois, (1907) Minnesota, (1910) Illinois, South Dakota		(1902)	Washington
Hahnemann Medical College and Hosp. of Chicago (1920) Illinois		(1917)	Kansas
Harvey Medical College		(1904)	Oregon
Hering Medical College		(1906), (1910)	Illinois
Loyola University		(1916, 2)	Illinois
Northwestern University		(1902), (1908), (1910), (1912), (1913)	Illinois
Rush Medical College (1895) Iowa, (1897) Washington, (1900) Illinois, (1902) Washington, (1908) Illinois, Indiana, (1912), (1917), (1918), (1920) Illinois		(1882) Minnesota, (1894)	Illinois
University of Illinois (1917), (1920) Illinois		(1911) Illinois, (1915)	Missouri
Fort Wayne College of Medicine		(1900)	Indiana
Indiana Medical College		(1906)	Michigan
Physio-Medical College of Indiana		(1907)	Indiana
College of Physicians and Surgeons, Keokuk		(1895)	Illinois
State University of Iowa College of Medicine		(1920)	Iowa
Kansas Medical College, Topeka		(1894)	Louisiana
Hospital College of Medicine, Louisville		(1890)	Illinois
Kentucky School of Medicine		(1898) Indiana,	(1906) Penna.
University of Louisville Medical Dept.		(1912),	(1913) Kentucky
Tulane University		(1912),	(1920) Louisiana
Medical School of Maine		(1903),	(1911) Maine
Baltimore Medical College		(1890)	Maryland
Johns Hopkins Univ. (1908) New York, (1910),			(1915) Maryland
Boston University		(1917)	Mass.
College of Physicians and Surgeons, Boston		(1890)	Mass.
Columbia University (1905), (1908), (1911), (1912),			(1916) New York
Eclectic Medical College of the City of New York		(1912)	New Jersey
Long Island College Hospital		(1908),	(1909) New York
University and Bellevue Hospital Medical College		(1915)	New York
University of Buffalo		(1910)	New York
Leonard Medical School		(1908)	Louisiana
Cleveland Homeopathic Medical College		(1909)	New York
Eclectic Medical Institute, Cincinnati (1902) Ohio		(1896),	(1899) Illinois
Medical College of Ohio		(1876) Illinois,	(1898) Kentucky
Pulte Medical College		(1910)	Ohio
Starling Medical College		(1891)	Oklahoma
University of Cincinnati College of Medicine		(1917)	Ohio
Willamette University Medical Dept.		(1906),	(1909) Oregon
Jefferson Medical College (1914) New Jersey, Pennsylvania		(1904) Iowa, (1908),	(1909) Utah
Medico-Chirurgical College of Philadelphia		(1911)	Utah
Temple University (1917) Pennsylvania		(1906) Pennsylvania, 1910)	Minnesota
University of Pennsylvania		(1899)	Penna.
Western Pennsylvania Medical College		(1888)	Indiana
Mcharry Medical College (1918) Georgia		(1907) Texas, (1915), (1917)	Tennessee
Memphis Hospital Medical College		(1910)	Mississippi
Vanderbilt University		(1890)	Tennessee
Baylor University		(1916)	Utah
Harvard University (1906) Maine, (1907) Nevada		(1900) North Dakota, (1903)	Mass.
Tufts College Medical School		(1898), (1908)	Mass.
Detroit College of Med. and Surg.		(1911), (1914), (1915)	Michigan
Grand Rapids Medical College		(1901)	Michigan
University of Michigan Homeopathic Medical School		(1908)	Penna.
University of Michigan Medical School (1891) Colorado, (1908) Montana, (1909), (1919) Michigan		(1888)	New York
Minneapolis College of Physicians and Surgeons		(1899)	Washington
University of Minnesota College of Med. and Surg.		(1895)	Minnesota
American Medical College		(1897)	N. Dakota
Barnes Medical College		(1907)	Illinois
Ensworth Medical College		(1906)	Kansas
Kansas City Medical College		(1893) Texas, (1902)	Oklahoma
Medico-Chirurgical College of Kansas City		(1905)	Kansas
National University of Arts and Sciences		(1914)	Missouri
St. Louis College of Phys. and Surgs.		(1905), (1906)	Illinois
Washington University		(1901)	Missouri
John A. Creighton Medical College		(1906), (1915)	Nebraska
Omaha Medical College		(1896)	Nebraska
University of Nebraska		(1903)	S. Dakota
Dartmouth Medical School		(1899)	New Hamp.
Albany Medical College		(1906) New Hampshire, (1908)	New York
University of Texas		(1907, (1919)	Texas
University of Vermont		(1915)	Indiana
Medical College of Virginia		(1917)	Virginia
Marquette University		(1914)	Wisconsin
Milwaukee Medical College		(1895)	Wisconsin
McGill University		(1904)	N. Dakota
University of Toronto		(1903) New York, (1911)	Colorado
Western University		(1910)	Ohio
University of Vienna		(1894)	Montana
University of Munich		(1908)*	Washington

College	ENDORSEMENT OF CREDENTIALS	Year Grad.	Endorsement with
Rush Medical College		(1900)	U. S. Navy
Omaha Medical College		(1897)	U. S. Army
Columbia University		(1909)	U. S. Navy
Jefferson Medical College		(1913)	U. S. P. H. S.
University of Buffalo		(1897)	U. S. Army
Medical College of the State of South Carolina		(1892)	U. S. P. H. S.
Marquette University		(1917)	U. S. Army

* Graduation not verified.
† No grade given.

Medical Economics

PHYSICIANS AND THE INCOME TAX

At this time all professional men are beginning to think about the income tax and to worry over the making of tax returns. As usual, THE JOURNAL has received letters from many physicians asking for information on the ways in which the income tax law affects physicians and for specific advice as to the general provisions of the law and the regulations. In previous years THE JOURNAL has endeavored to advise its readers on these points (THE JOURNAL, Jan. 10, 1920, p. 126; Feb. 12, 1921, p. 455.) Since the returns for last year were filed, a new law has been passed. The Revenue Act of 1921, approved by the President, became effective, Nov. 23, 1921. While the general provisions remain the same, there have been a number of changes.

GENERAL PROVISIONS

The general provisions of the law are the same for physicians as for any others. Every citizen of the United States, whether residing in this country or abroad and whether he derives his income from property in the United States or abroad, is subject to taxation. Resident aliens, whether their incomes are derived from sources within or outside the United States, must also file returns and pay the tax.

PERSONAL EXEMPTION

Under the new law, married persons, living with husband or wife, or the head of a family, may deduct $2,500, if the net income is not in excess of $5,000. This is an increase of $500 over the previous law. If the income is in excess of $5,000, then the exemption allowed is only $2,000. For each dependent person in the household, a deduction of $400 additional may be made. This is an increase from $200 for each dependent under the old law. Dependency is defined as actual financial dependency and not mere legal dependency. The dependent must be under 18 or incapable of self support, on account of physical or mental disability. Single persons, as individuals, are allowed $1,000 exemption.

WHO MUST FILE RETURNS

All persons whose net income for 1921 amounts to $1,000 or over, must file returns, even if the exemptions are sufficient to relieve them of paying any tax. Internal Revenue Collectors state that blanks sent to persons having a supposedly taxable income will often be returned unfilled with the statement, "No taxable income." This is not accepted as legal evidence of exemption. If one's net income is over $1,000, the burden of proving exemption lies with the individual, who must present a detailed and carefully prepared return under oath, as evidence of his exemption, just as though he had a taxable income.

FORMS FOR MAKING RETURNS

Those having a net income of less than $5,000 should ask for and fill out Form 1040 A. Those having a net income of $5,000 or over should ask for Form 1040. These forms, with instructions, can be secured from the Internal Revenue Collector of your district.

NEW LAW RETROACTIVE

While the new revenue law did not become effective until Nov. 23, 1921, the income tax provisions are retroactive to January, 1921, and apply to incomes for the entire calendar year of 1921.

PROVISIONS REGARDING RETURNS

Failure on the part of the taxpayer to receive a blank does not excuse him from making a return. All income tax returns must be verified under oath before a notary public, judge, revenue collector or other person authorized to administer oaths. The forms when filled out must be delivered or mailed to the collector for the district in which the individual resides, and must be in the hands of the collector on or before March 15, together with a check for the entire tax or for an instalment. Exemption is determined by the civil state of the taxpayer on the last day of the year. For instance, a man who marries during the last week in December is regarded as a married man for the entire year; a widower whose wife died in December and who has not since married is regarded as a single man for the entire year.

SPECIAL PROVISIONS FOR PHYSICIANS

The foregoing general provisions are comparatively simple. It is when the physician begins to estimate his net income for 1921, in order to determine the amount on which he must pay an income tax, that he comes in contact with the special application of the law to physicians. The income tax law regards the physician as a business man. It applies the same rules to him that it does to any other business man. He is required to pay a tax only on his net income, i. e., on the difference between his gross professional receipts for the year and his total business expenses for the year. In this particular, the income tax law has been of great educational value to physicians, since it has made it necessary for them to keep their accounts so as to be able to determine their actual expenses and to separate their personal from their professional expenditures. Prior to the passage of the income tax law, physicians were all in the habit of saying, "I did a good business last year. I took in nearly $15,000." They entirely overlooked the fact that expenses increase proportionately with business and that the actual income with a larger intake is often no greater than, if as large as, it is with the smaller receipts. Since the income tax law went into effect, physicians have been forced to keep books much more carefully. As a result, they are today better able to determine their actual financial standing at the end of any year.

Leaving out of account any proceeds which result from the sale or rental of house and lands, income from stocks, bonds and other investments, in which case the law applies to the physician exactly as it does to any other man, how is the income tax law to be applied to the peculiar conditions under which physicians carry on their professional work? Three things must be remembered.

I. GROSS INCOME: WHAT IS IT?

A physician's gross income for the year is the sum of all the money he receives during that year for professional work, regardless of when the services were rendered. Money collected in January, 1921, for services rendered or operations performed in 1920 are a part of the income for 1921, the year in which it was received, and not of 1920, the year in which it was earned. Physicians' books should be kept so as to show the total amount of money received for professional services from Jan. 1 to Dec. 31, 1921, inclusive. The total is the gross professional income for the calendar year.

II. PROFESSIONAL EXPENSES: WHAT MAY BE DEDUCTED?

The second principle to be remembered is that all expenditures necessary for carrying on one's practice during the year (except investments) are deductible. It is on this question of what constitutes allowable deductions that most physicians fall into difficulties. Deductible professional expenses are all the necessary expenses for the carrying on of practice or for material consumed in professional work. This would include office rent and maintenance, wherever the office is located, provided it is not in a building owned by the physician. If a physician maintains an office in his own house or in an office building which he owns, he cannot charge himself rent and deduct the amount. If he rents an office for business purposes alone, in a building outside his residence, then the entire rental is deducted. If his office is located in a rented house, in the house or apartment in which he also has his residence, then a part of the rental, in proportion to the amount of space used for business purposes, may be deducted as office rent. The same rule applies to expenditures for heating, lighting and maintaining an office. If a physician having his office at his residence has a servant, part of whose time is devoted to office work, then part of her wages may be deducted. Salaries of office attendants, assistants, stenographers and the like are deductible. The fact that a physician occasionally sees a patient at his house does not justify him in making a deduction for rental. In order to be allowed expenses for office maintenance, he must actually have an office with regular office hours in his house.

Drugs and Dressings.—The cost of drugs, dressings and other material, actually used in the treatment of patients, is an expense and may be deducted; but the cost of instruments, appliances and equipment, which are to be used over a considerable period of time and which are a part of the physician's professional outfit, is an investment and not an expense. The distinction is based on the difference between expendable and nonexpendable property. Anything that is used up or consumed or which may be used up during the year is an expense. Anything that is of permanent use or value is an investment. Under this distinction, office furniture and equipment, instruments and apparatus would not be deductible, but the cost of drugs, dressings, breakable material, clinical thermometers, chemicals, etc., would be deductible.

Transportation.—Whatever form of transportation a physician uses for business purposes only, the cost of maintaining such transportation is a deductible expense. The original cost, however, is an investment, not an expense. The amount paid for an automobile which will probably last for a number of years cannot be deducted but so far as the physician uses an automobile for business purposes, the cost of operating is deductible. This includes gasoline, oil, tires, insurance, repairs, garage rental, chauffeur's wages, etc. In addition, the owner can charge off each year reasonable depreciation on the car; that is, the amount of the original cost of the car divided by the number of years for which the car can be used. This does not mean the number of years that the physician can use the car, but the number of years it can be used for any purpose. If the car is sold, the price received is an addition to the physician's income for the year. If the car is used both for professional and for personal purposes, or if it is used by the physician or his family for recreation, then the proportionate expense of operating the car for business purposes alone may be deducted. A physician doing an exclusive office practice, who merely uses his car to go down to his office in the morning and to go home at night, cannot deduct the operating expense, since he is using the car for his personal convenience and not as a means of gaining a livelihood.

The same rule applies to horses, if a physician uses them for business purposes, instead of an automobile. The original cost is an investment, but the maintenance and operation are deductible expenses. These would include feed and care of horses, rental of stable, wages of driver, repairs on carriage or sleighs, etc. Reasonable depreciation on horses, carriages, sleighs, harness and other equipment would be deductible.

Books and Journals.—Medical journals are an expense. Money paid out for subscriptions to them may be deducted, because they are of temporary value. Medical books are an investment, as a part of a physician's library, and the cost may not be deducted. But medical books become obsolete to varying degrees, depending on their character. Standard textbooks, such as works on anatomy and chemistry, are probably good for a lifetime, while many books are out of date and worthless in a few years. The general average is about twenty years, so that one twentieth of the cost of the physician's library may be deducted each year as depreciation. Any property purchased before March 1, 1913, when the first income tax law went into effect, must be estimated at its value at that time and not at its original value or purchase price.

Medical Society Dues.—Dues in medical societies of a strictly professional nature are a legitimate expense and may be deducted; but dues for social organizations, even if they are limited to medical men, are not deductible. Expenses incurred in attending medical society meetings are deductible. Prior to 1921, only railroad fare and Pullman fare were allowed. Last year, in addition to these expenses, the Commissioner of Internal Revenue ruled that, on actual business

trips, expenditures for meals and lodging were expenses and that this amount, less what one would have to pay at home for living expenses for the same period, could be deducted. The new ruling is still more liberal. Under the present law, the entire cost for meals and lodging for the entire time one is away from home on strictly business trips may be deducted, in addition to railroad and Pullman fare. Physicians attending meetings of state medical associations or the American Medical Association and other strictly professional meetings and conventions may deduct these expenses. Personal expenses incurred during this period, however, may not be deducted. THE JOURNAL is frequently asked whether the cost of a postgraduate course can be deducted. The law provides that money expended for postgraduate courses, like money paid for a medical education, is an investment. Expenditures for postgraduate work, therefore, cannot be deducted.

Laboratory Expenses.—Physicians maintaining a laboratory may deduct rent and maintenance expenses if the laboratory is separate from and in addition to the office expenses. They may also deduct salaries paid to laboratory assistants, cost of chemicals, breakable apparatus, roentgen tubes and plates. Expenditures for permanent apparatus are an investment and cannot be charged up as expenses. But such permanent apparatus is subject to depreciation, which can be deducted. Under the same ruling as on automobiles, deduction is made for the original cost to the physician or its value, March 1, 1913, divided by the total number of years which it can be used. Oculists furnishing glasses for patients can deduct the cost of this material to the oculist, provided two distinct charges are made on the doctor's books, one for his professional services in examining the eyes and one for the glasses for the patient. The first is a professional charge, which goes into the income, and the second is the cost of furnishing perishable material, which is a deductible expense.

Contributions and Donations.—Contributions and subscriptions to churches and other philanthropic, religious and humane organizations may be deducted, as well as contributions to educational institutions, etc.; but the amount deducted must not exceed 15 per cent. of the total income. Dues to clubs and other social organizations are personal and not business expenses, and cannot be deducted.

Taxes Already Paid.—Government taxes already paid on railroad or Pullman tickets, theater tickets, articles of luxury, club dues and society dues can be deducted, provided evidence of such payment can be produced. Uninsured and unrecoverable loss by fire, theft or other means is also deductible, provided satisfactory evidence of the loss can be produced.

Total Deductions.—All of the foregoing items are legitimate business expenses, and the sum total of them can be deducted from the total gross income.

III. NET INCOME

The physician's net professional income is the difference between his gross professional receipts and his total professional expenses. This is the amount, less personal deductions, on which the income tax must be paid.

No attempt has been made to consider the exemptions or deductions which a physician may make on account of any income which he may have outside of his professional work, where he is, of course, subject to the same ruling as any other business man. Any receipts, such as interest on bonds, dividends on stock and any other business relations, or on property rented or sold, etc., must be added to his medical profession income and it will be subject to tax. Only those transactions which are a part of the physician's professional work have been considered.

It will be seen that it is wise to keep accurate accounts, not only of all money received but also of all expenditures, and to separate carefully business from personal and family expenses. The more carefully this is done, the easier will it be, at the end of the year, for the physician to know just how much it has cost him to carry on his practice, what is the exact amount of his personal expenses, and what are his financial returns for the year. It will also be easier for him to make out his tax returns and to secure those exemptions and deductions to which he is entitled. THE JOURNAL will be glad to answer, so far as possible, any questions on this subject.

Social and Industrial Medicine

THE PRESCHOOL NUTRITION CLASS

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The Child Welfare Society of Washington, D. C., has extended its scope of work and, for the last two years, has included the important group of children of preschool age. A preliminary survey revealed among them a surprisingly large number of physical defects in addition to malnutrition. To find children, so young in years, showing evidence of structural impairment was, indeed, a surprise. To remedy the physical defects was a serious problem. The limited number of nurses in the employ of the society could ill be spared from their ever increasing duties and obligations to the babies. Moreover, it required more than one follow-up visit to convince doubting parents of the necessity of remedial measures—particularly so, for the children were neither complaining nor were they "sick."

The failure of many parents to recognize the importance of early remedial measures is responsible for the various physical and mental handicaps of schoolchildren. These are only too familiar to the medical inspectors of our schools. Accordingly, the Child Welfare Society has adopted in its campaign the slogan: "Make the Child Fit for School."

The nutrition classes, so successfully introduced by Dr. William R. P. Emerson, long ago proved their value in helping delicate schoolchildren. The element of competition and of rivalry brings forth a ready response in the older children. The application of the same principles to children from 2 to 6 years of age was undertaken with some misgiving. Thanks to generous friends of the society, the salary for a nutrition nurse was assured and two nutrition classes for underweight children of the preschool group established.

It may not be amiss, therefore, to record our initial experiences in this new public health adventure. The classes were in session twenty-one weeks, from Dec. 3, 1920, to May 9, 1921. Forty-five children were enrolled, consisting of twenty-six boys and nineteen girls. Their ages ranged from 2 to 6 years, with three exceptions. The latter were children aged 7, 8 and 10 years, respectively. The percentage of underweight varied from 4 to 20 among the boys, and from 6 to 17 among the girls. There were two boys with an underweight percentage of 20, and one girl with an underweight percentage of 17. There was a total of 140 defects among the boys, yielding an average of 5.6 defects per boy. The minimum number of defects was two, and the maximum eleven. The group of girls showed a slightly better record, with a total of 100 defects and an average number of 5.2 defects per girl. The minimum was one and the maximum number of defects was nine.

Complete physical examination was made of each child in the presence of a parent or the guardian, and the defects were pointed out. The twenty-four different kinds of defects consisted of malnutrition, hernia, hyperspadias, undescended testicle, strabismus, keratitis, enlarged tonsils and adenoids, vaginitis, adherent foreskin, enuresis, intestinal parasites, kyphosis, lateral curvature, flatfoot, carious teeth, alveolar abscess, eczema, otitis media, cerumen, enlarged lymphoid glands congenital syphilis, endocarditis, glandular deficiency, and lastly, psychologic abnormality.

MALNUTRITION AND ITS CORRECTION

The physical examination of the child at the health center served as a means of introduction to a fuller knowledge of the child, of his habits, and of his home surroundings. As

the result of these observations, the following causes have been found contributing to malnutrition: (1) Late hours. Many parents considered 9 o'clock as an early hour for bed, and not a few children went to bed at 11 and 11:30 p. m. (2) Overfatigue. This resulted from failure to observe periods of rest after overindulgence in play, and in some cases from lack of proper amount of sleep. (3) Insufficient outdoor air by day and night. Some children insisted on playing indoors. In the case of families living in apartment houses, the time for the outing of children was limited because of the household demands made on the mother. Moreover, the shortage of adequate housing facilities necessitated the use of bedrooms by too large a number of persons. In a few instances, the windows were not kept open enough during the night. (4) Two meals a day. These were the reward of "Late to bed and late to rise." (5) Irregular meals. The children eating at irregular hours usually found the family table deserted and grew accustomed not to eat at the table and preferred eating from the hand. (6) Improper diet. Coffee, tea, sausage, and sauerkraut were samples of the many unsuitable foods which were given to children under 6 years of age. Candy between meals seemed, also, to be the rule. (7) Diet of low caloric value. This was determined by calculating the calories of the child's dietary, which was submitted by the mother.

The correction in the child of such faulty habits as were discovered became an important task of the nutrition nurse. The ignorance of parents, fully as much as family tradition, proved to be at times serious obstacles on the highway to correct living. The function of the nutrition nurse was not to give the uninformed mother a postgraduate course in the preparation of food and in the determination of caloric values with or without the use of logarithms. Racial or traditional methods of preparing foods have withstood the test of time, and a mother's loyalty to them is likely to make her intolerant of the advice of dietitians, however sound the advice may be. The duty of the nutrition nurse is to impress on the mother the fact that coffee, tea and sausage, irrespective of chemical composition, caloric content and method of preparation, are improper articles of diet for children under 6.

ELIMINATION OF DEFECTS

Fully as important as the correction in the undernourished child of faulty diet and faulty mode of living was the elimination of such defects as were remediable. To attain this desirable result, 209 recommendations were made to the forty-five children who were enrolled in the classes. This amounted to 4.6 recommendations per capita. All of these were complied with, excepting 0.4 recommendation for each child.

The children were referred both to clinical agencies for examination and appropriate treatment, and to laboratory agencies for purposes of diagnosis. There were 131 clinical and seventy-eight laboratory recommendations; 114 of the former and seventy-four of the latter were followed. The clinical group consisted of the following recommendations which were complied with: three children treated by the endocrinologist, two by the aural surgeon, twenty-three by the dental surgeon, eighteen by the orthopedic surgeon, and four by the general surgeon; thirty-five children were examined by the rhinologist, and in twenty-one operation was advised and performed in twelve (at this writing four children are on the waiting list for operation); fifteen were vaccinated, two circumcised, and twelve examined by the mental hygienist. Thus, of all the clinical recommendations, 12.9 per cent. were refused. The greatest number of failures was among those referred for vaccination.

The laboratory recommendations which were complied with consisted of fifteen photographs, four roentgenologic examinations, five Wassermann reactions, six Pirquet tests, one test for protein sensitization, fourteen microscopic blood examinations, fifteen microscopic examinations of stools, and fourteen urinalyses. In the laboratory group, the percentage of noncompliance was 5.1.

GAIN IN WEIGHT

Obviously, every reasonable resource was employed to have the children attain their normal weight; and, as indicated above, it required the cooperation of the child, the family, the nutrition nurse and the medical specialists. The results of this joint action were gratifying. Six children were graduated from the classes.

The accompanying table contains the data relative to the graduates.

GAIN SHOWN BY SIX GRADUATES

	Age, Years	Underweight, per Cent.	Defects, No.	Normal Gain	Actual Gain	Weeks to Graduate
1. Boy	3 4/12	10	9	3 oz. (85 gm.)	3¾ lbs. (1,701 gm.)	3
2. Girl	3 7/12	17	9	1¼ lbs. (567 gm.)	6¾ lbs. (3,068 gm.)	20
3. Girl	4 3/12	10	5	14 oz. (397 gm.)	4½ lbs. (2,041 gm.)	13
4. Boy	4 10/12	6.4	2	1 lb. (454 gm.)	3¾ lbs. (1,701 gm.)	15
5. Boy	5 8/12	9.9	6	15 oz. (425 gm.)	8⅝ lbs. (3,909 gm.)	14
6. Boy	7 8/12	4	6	1⅝ lbs. (794 gm.)	5 lbs. (2,268 gm.)	13

Among the graduates, it might be stated in summary, there was an average percentage underweight of 9.5 per child with an average number of six defects. The minimum period required to reach the normal weight curve was three weeks, the maximum twenty weeks—yielding an average of thirteen weeks. During the same period, the total normal gain for the children might be represented as 6 pounds (2.8 kg.). The total actual gain, however, was 32½ pounds (14.8 kg.), or 26½ pounds (12 kg.) in excess of normal. Therefore, each graduate in an average of thirteen weeks gained an average weight of 6 pounds and 6 ounces (2.9 kg.) or almost 8 ounces (2.25 kg.) a week in excess of normal.

More significant than the record of successful achievement with six graduates was the fact that twenty-eight children were made "free to gain." In the latter group of children, every recommendation for the correction of both faulty habits and physical defects was carried out. Furthermore, the total gain of all the children enrolled in the two nutrition classes was 2,009¾ ounces (57 kg.). The total loss was 668¼ ounces (19 kg.), leaving a net gain of 1,341½ ounces (38 kg.).

FAR-REACHING BENEFITS

The results of our efforts are not to be measured by the net gain in weight, however desirable. The influence of the class sessions has, indeed, been far reaching, for many subtle forces have been operative. The advantages of "class methods," in vogue for many years in the educational world, have become so obvious that they have been finally adopted in the dispensaries of the large hospitals throughout the country. Mothers and children in the nutrition classes are impressed with the beneficent results which follow compliance with simple recommendations. Symptomatology and treatment of disease find no place in the curriculum, for the dominant thought is physical well being. Moreover, ample evidence is available to offset erroneous notions which have been handed down from one generation to another. A child need no longer be of subnormal physique because his parents or grandparents have been victims, willing or otherwise, of malnutrition. The book of hygiene is open to all, and no department of medicine has a monopoly on it. In addition, the dread of operative procedure is dispelled. Mothers will unconsciously bring to mind the horrible pictures of the anti-vaccinationists and lay stress on the rare accident in tonsillectomies. In the classes, parents see the children who have

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been vaccinated and those who have had their tonsils and adenoids removed. Far from being incapacitated, these children gain weight and serve as a great object lesson to the skeptics.

Despite their scant years, children in preschool nutrition classes display a well developed spirit of competition. This is evidenced in the interest shown in the leader of the class, and in the tears shed by the unsuccessful candidates for gold stars, or shed on failure to graduate. A child who has been ungovernable becomes amenable to suggestion when he realizes what he must do to gain in weight and "win his stars." Respect for authority reinforces the element of self-control. The child becomes a healthier child, and the foundation for better citizenship is strengthened.

"To make the child fit for school" commands the serious attention of all child welfare agencies. In no better way can its accomplishment be gained than through the means of nutrition classes for delicate preschool children, as our experiences have indicated.

Book Notices

INSANITY AND MENTAL DEFICIENCY IN RELATION TO LEGAL RESPONSIBILITY. A Study in Psychological Jurisprudence. By William G. H. Cook, LL.D. Cloth. Price, $4. Pp. 192. New York: E. P. Dutton & Co., 1921.

Although written by an English barrister, naturally with reference to English statutes, this book will be read with interest and profit by American physicians interested in medical jurisprudence. Embracing, as it does, analyses of decisions in 200 leading cases, it is of great value as a work of reference without regard to the theory advanced as to the legal responsibility of the insane, as to any acts which he may commit or any contracts into which he may enter. The chapter on definition and classification is particularly interesting as illustrative of the changing attitude of both the medical and the legal profession regarding insane persons. The bulk of the book is devoted to discussing the responsibility of the insane under both the criminal and the civil law. The chapter on evidence of insanity, dealing with both legal and medical methods of determining mental conditions, is especially interesting. The appendix contains a summary of English authorities on the control of insane persons, and suggestions for the improvement of governmental administration in this field. Owing to our different form of government, none of these administrative suggestions will apply to the United States. The last one, however, that the care of all persons of unsound mind be put under a subdepartment of the ministry of health, is of interest as showing the gradual expansion of such a department after it is once created.

GOUT. By Llewellyn Jones Llewellyn, M.B., Governor and Senior Physician, Royal Mineral Water Hospital, Bath. With a section on Ocular Disease in the Gouty. By W. M. Beaumont, Consulting Ophthalmic Surgeon to the South-Western Region of the Ministry of Pensions. Cloth. Price, $7.50. Pp. 469, with 1 illustration. St. Louis: C. V. Mosby Company, 1921.

The first part of the well-written chapter on ocular disease is a description of the various types of diseases of the eye that have been found to occur in persons suffering with gout. It is in the nature of a verbal discussion, rather than a definitive clinical description, and is intended more for the perusal of the trained ophthalmologist than for the tyro. And then comes the meat. "Gouty iritis is not a clinical entity." Gout, that etiologic standby of British ophthalmologists from time immemorial for nearly every "itis" known to ophthalmology, is denied causative importance and is classed among the sequelae of that twentieth century child, focal infection. Beaumont comes to the conclusion that "it is unwarrantable to speak of 'gouty' ocular disease, for there is nothing of the inflammation specific of gout. We renounce the prefix in order that (1) we may not be lulled into false etiologic security and (2) we may approach the elucidation of the case and the treatment thereof free from misconceptions." An earnest search for the etiologic factors of ocular disease from the standpoint of the American advocates of the focal infection theory is urged, and the author even comes out flat-footedly in favor of "state medicine" as an aid to such investigation.

THE BOOK OF POULTRY. Cloth. Price, $5. Pp. 672, with illustrations. New York: The Macmillan Company, 1921.

This is a compilation of information by numerous authorities. Chapters on Mendel's law and mendelian experiments, on methods of breeding and influences affecting offspring, on control of fertility and methods of feeding, have much scientific interest. Hundreds of varieties of fowls, pheasants, ducks and geese are described and illustrated. This compendium on the care and control of the breeding of chickens makes one wish that as much were known of the same matters as they affect the human race.

Medicolegal

Board of Health Barring Traveling Shows

(Benson v. Walker et al. (U. S.), 274 Fed. R. 622)

The United States Circuit Court of Appeals, Fourth Circuit, says that this suit was instituted on April 30, 1920, against the defendants, constituting the board of health of Alamance County, North Carolina, and the sheriff of said county, to enjoin the sheriff from interfering with the operation of the complainant's show and to compel him to issue the proper license to conduct the show, after the sheriff had refused to accept the license tax and to issue the license, because, as he said, he had been forbidden to do so by the board of health of the county, pursuant to a resolution of that board. The resolution was to the effect that, whereas the county was just recovering from a serious epidemic, and, in other parts of the country, both within and without the state, epidemics of contagious and infectious diseases were very prevalent, and were likely to be spread and contracted by personal contact in dense crowds, and because the board was of the opinion that traveling shows, such as circuses and carnivals, were the means of transmitting and spreading dangerous and infectious diseases, and that their coming into Alamance County from other portions of the state, and from other portions of the country, with their attendant crowds, constituted a menace to the health of the people of the county, "therefore, be it resolved that until Aug. 1, 1920, all such traveling shows, usually denominated circuses and carnivals, be prohibited from exhibiting in Alamance County." The United States district court in which the suit was instituted granted a temporary injunction, which it, a few days later, vacated. The circuit court of appeals, in approving such vacation, says that it was not called on to determine whether the original injunction should have been granted or not, but merely whether there was error in vacating and discontinuing the same, and on that question it was entirely in accord with the court below. That the action of the board of health, sought to be enjoined and made inoperative, was respecting a matter clearly within the police power of the state, and within the peculiar province of the health authorities, was manifest, that is, the health of the county; and for a cause which the board found and certified would be inimical to the health of the community, namely, the gathering of large numbers of people from without, and from one community to another within their jurisdiction, would tend to the spread of the Spanish influenza, a disease which at that time, or shortly theretofore, had been epidemic, bringing death and much sickness and disease in the community. Nothing is better settled than that in the consideration of ordinances and laws of the character in question here, every intendment is to be made in favor of the lawfulness of the exercise of municipal power in making regulations to promote the public health and safety. It is not for the courts, in the administration of justice, to substitute their judgment for that of the legislative or municipal

authority or to interfere with the lawful exercise of the power and authority granted in furtherance of the ends desired, unless those acting have plainly and manifestly exceeded their power and authority to the prejudice of those affected. This is strikingly true in considering rules and regulations coming clearly within the domain and discretion of public health authorities. That the board of health, in the passage and carrying out of the resolution complained of, acted not with the proper motive and intent in the interest of the public health, but arbitrarily, unreasonably, and discriminatorily as against the complainant, involved questions of fact which should call for the strictest proof on his part, especially in dealing with public officials charged with the preservation of the health of the community.

Test for Physicians Prescribing Narcotics

(Barbot v. United States (U. S.), 273 Fed. R. 919)

The United States Circuit Court of Appeals, Fourth Circuit, in affirming a judgment of conviction of defendant Barbot, a physician, of violating the Harrison Narcotic Law, says that the facts in the case, that is, that the defendant prescribed, sold, and distributed drugs and narcotics as charged in the indictment, in large quantities, were not in dispute. Indeed, the defendant insisted on his right, as a licensed physician, so to do, and that he was acting from a humanitarian standpoint, and that, so far as the Harrison act inhibited him from so doing, it was in contravention of his constitutional rights. But he could not for a moment set up the defense of his conduct that, from his point of view, what he had done, though in the teeth of the law, was in the interest of humanity. An excuse for violating every law would be readily found, if such a defense could be interposed. The meaning and purpose of the act, as regards physicians, is manifest; namely, not that they may not in a proper case, in good faith, prescribe drugs for a patient whose malady is such that, in their professional judgment, the drug is necessary, but only that they may so prescribe, in good faith, for their patients in the course of their professional practice; and, of course, this does not contemplate prescribing drugs for persons who merely want them in order to gratify their appetites or desires, or because of their unfortunate habit of the use of the drugs. A careful review of the decisions as they exist at the present time makes clear the fact that, when a physician is charged with unlawfully selling or prescribing drugs under the Harrison Narcotic Law, the case turns largely on his good faith in prescribing drugs to his regular patients, for maladies requiring the administration of the drug, or on the question as to whether he prescribed for persons seeking his professional aid merely to procure the drug. In the latter case, the physician might, perhaps, in a single instance afford temporary relief for one whose condition demanded immediate treatment. To go further than this would enable every doctor to furnish the drug to addicts, or afford opportunity to them to procure all the narcotics they desired; since, unrestrained, they would go from one physician to another, and quickly destroy the whole purpose of the act in question.

Burden of Proof on Quarantine Officers

(Ex parte Arata (Calif.), 198 Pac. R. 814)

The District Court of Appeal of California, Second District, Division 1, in explanation of why it, on a writ of habeas corpus, ordered the petitioner discharged, when the health department of the city of Los Angles had instructed the jailer and chief of police not to release her until she had submitted to an examination to determine whether she was infected with a communicable, infectious or quarantinable disease, says that at the hearing on the writ proof was not offered to be made that she was at the time of her arrest a woman of ill fame. That the health authorities possess the power to place under quarantine restrictions persons whom they have reasonable cause to believe are afflicted with infectious or contagious diseases coming within the definition set forth in Section 2979 a of the Political Code of California, as a general right, may not be questioned. It is equally true that, in the exercise of this unusual power, which infringes on the right of liberty of the individual, personal restraint can only be imposed when, under the facts as brought within the knowledge of the health authorities, reasonable ground exists to support the belief that the person is afflicted as claimed; and as to whether such order is justified will depend on the facts of each individual case. When a person so restrained of his or her liberty questions the power of the health authorities to impose such restraint, the burden is immediately on the latter to justify by showing facts in support of the order. It might be proved, for instance, that the suspected person had been exposed to contagious or infectious influences; that some person had contracted such disease from him or her, as the case might be. Such proof would furnish tangible ground for the belief that the person was afflicted as claimed. But the court wishes here to emphasize the proposition, which is unanswerable in law, that a mere suspicion, unsupported by facts giving rise to reasonable or probable cause, will afford no justification at all for depriving persons of their liberty and subjecting them to virtual imprisonment under a purported order of quarantine.

Coming, then, to a case in which it is claimed that the person suspected is one whose habits are such as to warrant the belief that such person is afflicted with a venereal disease: The court may agree that in cases of persons who commit acts of prostitution—that is, acts that are commonly understood to fall within the "commercial vice" definition—such a majority of them may be afflicted with infectious venereal disease as to justify the health department in enforcing the preliminary measures as here shown as against any such; in other words, that, based on the experience of the health authorities as it was stated to be, it is reasonably probable that a person found to be of the class mentioned is so infected with such disease. If the health authorities rely on the claim that the person quarantined is a prostitute and hence likely to be afflicted with disease, then the burden is on the quarantine officers to establish the proof of the claim that the accused is of the class and character mentioned. If such person has been legally convicted of being of such class and character, the record of conviction may be relied on to establish the important fact. In the absence of such conviction, the burden will be with the health authorities to establish the fact by sufficient evidence; for it is the existence of that condition in the person suspected that furnishes the ground for the belief, as an inference only, that the disease exists. It will not do to allow the inference of probable cause to be drawn from a mere suspicion.

What Is Meant by Sick or Those with Infirmities

(State v. Gardner (Mo.), 231 S. W. R. 1057)

The Springfield (Mo.) Court of Appeals, in affirming a judgment of conviction of the defendant, a chiropractor, says that the statute provides that "any person attempting to treat the sick or others afflicted with bodily or mental infirmities," without a license from the state board of health, shall be deemed guilty of a misdemeanor. The verdict of the jury found the defendant guilty as charged by "attempting to treat the sick or those afflicted with bodily infirmities by manipulating, adjustments, or massages." It was contended that the use of the disjunctive "or" in the verdict annulled it, because it could not be certainly determined just what acts the jury found the defendant had committed. The court, however, does not think the verdict uncertain or open to the objection made against it. What the jury found was that the defendant had performed for the various witnesses who testified the service of alleged replacement of the bones of the spinal column by the process described as "adjustments," "manipulations," and "massages," these terms of necessity all referring to the same thing—the replacement of those bones; and the defendant, who was plying his trade in open violation of the law, knew exactly of what he was convicted by the jury. The terms "sick," and those afflicted with "bodily infirmities," are not intended to designate two classes of persons, but the use of those terms in the statute (and in the information and instructions in this case) is simply the use of words to include all persons that have or think they have any ailments of any kind.

Society Proceedings

SOUTHERN SURGICAL ASSOCIATION

Thirty-Fourth Annual Session, held at Pinehurst, N. C., Dec. 13-15, 1921

The President, DR. RANDOLPH WINSLOW, Baltimore, in the Chair

Operation for Diaphragmatic Hernia

DR. HARVEY B. STONE, Baltimore: Abdominal exploration is essential in the great majority of cases of diaphragmatic hernia. Thoracic approach greatly facilitates the necessary operative steps. The method of choice, therefore, for the routine handling of these cases should be by combined abdominal and thoracic incisions. These incisions are best made separately instead of by the French method of a continuous incision.

Conservative Surgery in Nonmalignant Diseases of the Pelvic Organs

DR. E. P. HOGAN, Birmingham, Ala.: Conservative surgery includes a correct diagnosis and such preoperative, operative and postoperative treatment as will save life primarily and restore the patient to health and a normal or as nearly normal existence as possible. Diseases of the female pelvic organs rarely kill immediately. Repeated acute or subacute attacks may require operation. Women under 35 operated on for a nonmalignant disease of the pelvic organs should have the menstrual and, if possible, the reproductive function preserved. Radical operation may be indicated in older women.

Surgical Treatment of Extensive Basal Cell Carcinoma

DR. J. SHELTON HORSLEY, Richmond, Va.: In extensive basal cell cancers, in addition to cauterization and excision with a cautery, it is important to apply as soon as possible, to the raw surface from which the cancer was excised, the raw surface of a pedunculated flap transplanted from a distance to add an additional obstacle to the growth of the cancer by interposing its own natural resistance to the cancer cells.

Aneurysm of the Internal Carotid Artery

DR. NATHAN WINSLOW, Baltimore: Aneurysm of the internal carotid artery outside the skull, though rare, is not as infrequent as supposed. Before incising a unilateral lump in the neighborhood of the tonsil, especially if of long standing, one should look, feel, listen. Spontaneous cure may occur, but the usual termination in untreated cases is rupture into the fauces. The operation of choice is obliteration of the internal carotid proximal to the sac. If this is impossible, one should ligate the common carotid together with the external carotid between its origin and first branch. All branches of the external carotid proximal to its site of ligation should also be tied. The operative mortality is 20 per cent.

Periosteal Sarcoma in Association with Osteomyelitis

DR. R. L. RHODES, Augusta, Ga.: My three cases of sarcoma were associated with infection and necrosis of bone. The left tibia was involved in each case. There was no history of trauma or serious illness. There was local pain in two, and none in the other. *Staphylococcus aureus* infection was found in each case. The treatment consisted of midthigh amputations. One patient died, and the other two are living, free from signs of recurrence, local or elsewhere.

Consideration of Some Nontuberculous Kidney Infections

DR. RAYMOND P. SULLIVAN, New York: The kidney is the eliminating organ for circulating microbes, and in the course of this elimination may itself be damaged in a variety of ways. Hematogenous infection may be restricted not only to a single kidney, but even to a circumscribed portion of the organ. Not only may the source of the infection be a general disease, but a distant and apparently insignificant focus may be responsible. Metastatic hematogenous infection of the kidney, perinephritic or paranephritic abscess, is not always easily recognized, and may be confused with intra-abdominal infections. A sudden attack of pain in the kidney region associated with fever in a patient known to have a suppurative process elsewhere in the body should excite suspicion of metastatic kidney infection. Cystoscopy and pyelography are valuable aids, especially when urinary changes are incomplete, or the symptoms are referred to the healthy side. The treatment of perinephritic or paranephritic abscess is early drainage. When the suppuration involves the kidney parenchyma, or when the process is an acute fulminating one, nephrectomy is indicated.

Reconstruction of the Female Urethra and Vesical Sphincter

DR. EDWARD H. RICHARDSON, Baltimore: If there is complete absence of the sphincter, the construction of a compressor of the vesical neck through transplantation of the partially detached pyramidalis muscle, together with its anterior fascia, or of the pubic portion of the levator ani muscle, is the operation of choice. Reconstruction of the urethra is best accomplished by the simple submucous tunnel operation followed by the use of a retention catheter until epithelization occurs from the bladder. When an excess of scar tissue, or other disadvantageous local conditions imperil the success of this procedure, the value of the various plastic flap operations alone or in conjunction with transplanted epithelial tubes has repeatedly been demonstrated. The use of the fallopian tube for this purpose, as attempted in my case, possesses distinct advantages. As in all reconstructive surgery, the frequent superiority of a several stage procedure must be borne in mind.

Jejunal Ulcer Without Previous Gastro-Enterostomy

DR. EDWARD P. RICHARDSON, Boston: The two cases that I saw appear to be instances of simple ulcers affecting the jejunum. No definite etiology may be assigned to them. Since syphilis produces a form of intestinal ulceration which affects the jejunum more readily than the ileum, and also has a tendency to cicatricial contraction and perforation, it must be considered as a possible cause of ulceration in some of these cases, although definite confirmatory evidence is lacking. Whatever the cause, the occurrence of perforation gives these ulcers a definite surgical importance, the more so since the perforation does not take place in one of the regions in which we are accustomed to search for it.

Pelvic Tumors with Sacral Attachments

DR. ARTHUR A. LAW, Minneapolis: Owing to the demonstrated tendency to malignant degeneration, these tumors should be removed when recognized, and they should always be attacked from behind through the sacrococcygeal route. The modified Kraske approach is ideal for the larger tumors and permits them to be shelled out with little difficulty, usually without invading the peritoneum, and facilitates the control of hemorrhage.

The interesting feature of this tumor is that there is only one tissue in it which can be differentiated definitely, and this tissue is prostatic tissue. This tissue suggests the interesting possibility that this tumor may represent an embryoma bearing the same relation to the prostate as do some of these tumors of the testicle to that organ, and that it might possibly be classed as a teratoma of the prostate in which development was one-sided. As it has been impossible definitely to differentiate this tumor, I have stressed the importance of the removal of these embryonic tumors ventral to the sacrum, as I believe that most of them tend to malignant degeneration.

The Remaining Breast After Radical Removal of the Opposite Side for Carcinoma

DR. HUGH H. TROUT, Roanoke, Va.: In twenty-seven cases of women under 40 years of age, who did not become pregnant, there was not a single case of recurrence of the cancer in the remaining breast, although the recurrences elsewhere in the body were much higher in this group than in the rest of the series, the patients all being over 40. Of this group over 40, about 10 per cent. developed cancer in the remaining breast, and this in spite of the fact of recurrences elsewhere in the body being as high as most of the recently published reports. Surgeons should warn patients who are in the child-

bearing period and from whom a carcinoma of the breast has been removed not to become pregnant for fear of serious trouble in the remaining breast.

Meckel's Diverticulum

DR. ALEXIUS MCGLANNAN, Baltimore: In a series of 276 cases there were nine instances in which the diverticulum was recognized as the cause of the obstruction. Six of the patients died, and three recovered after operation. In one case the diverticulum was attached to the inner surface of the umbilicus by a cord; in the others it was free or had become adherent by its tip, or a cord, to the bowel or mesentery. The obstruction was caused by entanglement of a loop of intestine around the diverticulum, except in one case, in which an adherent diverticulum kinked the bowel by traction. In none of the cases was there any umbilical deformity or discharge.

Bleeding Ulcer of the Duodenum Associated with Cholecystitis

DR. EDWARD S. JUDD, Rochester, Minn.: Within the past year I have operated on four patients with bleeding duodenal ulcers in whom the pathologic condition was more extensive in the gallbladder than in the duodenum. In each case, the duodenal ulcer could be demonstrated easily, and in one case it was of long standing, as evidenced by the amount of scar tissue. A very severe grade of cholecystitis was also present in all of these cases. The gallbladders of the four patients were very much alike, being rather larger than normal, with thick, edematous walls. They were not compressible, because of the inflammatory deposits in the tissues. They contained stones and infected bile in each instance. I believe that their mucous membranes were completely destroyed and that they were functionless. The findings in these four cases impressed us with the importance of infections in the gallbladder as a possible etiologic factor in cases of gastro-intestinal bleeding. A definite lesion in the duodenum was found in every instance and undoubtedly was the point from which bleeding occurred. The hemorrhages were of the massive type, such as usually occur from the pancreaticoduodenal artery, and yet in each case it was quite definitely shown that none of the larger vessels could be involved in the ulcerations.

Ligation of the Internal Iliac for Enormous Gluteal Aneurysm: Cirsoid Aneurysm of the Scalp

DR. WILLIAM D. HAGGARD, Nashville, Tenn.: The first patient complained of intolerable pain in the right leg and throbbing tumor of the right buttock as large as an inverted salad bowl. At operation the right internal iliac artery was exposed. It was as large as one's little finger. Two heavy silk ligatures were tied around the internal iliac one-half inch from its origin. To facilitate the agglutination of the wall of the aneurysmal sac, it was emptied by firm pressure and a large pad was tightly strapped over it and firmly held in place by adhesive plaster. Convalescence was uneventful. The second case showed itself as a subcutaneous swelling made up of a pulsating network of arterial sinuses, with tortuous branches spreading out to the left zygomatic arch on the left and across the median line to the opposite parietal region, and posteriorly toward the occipital region. The left anterior half of the scalp was covered with a large tumor, like an aggregation of dilated, tortuous, pulsating, bluish tinted, elevated blood vessels. Just to the left of the median line was a larger mass, the size of a child's hand, with tortuous, pulsating branches radiating out to the left zygomatic arch on the left. The entire tumor of blood vessels was excised. Eight months afterward, there was no return of the trouble.

Final Results in Myoma of Uterus and Myopathic Bleeding, Treated with Radium

DR. C. JEFF MILLER, New Orleans: The most striking feature revealed in the review of the cases treated by surgical intervention and by irradiation is the increasing percentage of myomectomies performed. The decision to adopt myomectomy in many cases formerly subjected to hysterectomy was prompted by the assurance that if myomectomy failed to control hemorrhage, radium could eventually complete the cure. With such assurance, the scope of conservative surgery has been materially widened. Of 107 patients, 102 reported complete relief from hemorrhage within five months after irradiation. Two of the remaining five required a second application before being relieved; two others were not relieved by a second exposure, and the remaining patient did not return. In two instances, massive growths as large as a seven months' pregnant uterus had shrunk below the umbilicus. These patients had been bad surgical risks and were irradiated to control bleeding. Both were subsequently operated on successfully. In cases of myopathic hemorrhage, such as are commonly classified as chronic metritis, hyperplasia, fibrosis, uterine insufficiency, etc., radium approaches more nearly the ideal specific than any other therapeutic agent at command. Subsequent reports as to the symptoms of the menopause were interesting. In women over 40 in whom preservation of function was not considered, about 60 per cent. reported flushes and the usual phenomena of the climacterium. In many the symptoms were reported as severe, and almost invariably their history showed that the bleeding had been of the aggravated type. The duration of symptoms lasted about the average of the normal menopause, but in two cases the flushes have persisted for six years, and the patients complain that the flushes are as frequent and severe as during the first four months following irradiation.

Epiplopexy

DRS. JOHN H. GIBBON and JOHN B. FLICK, Philadelphia: Our operative mortality was two out of ten cases; one patient died of pneumonia forty-eight hours after operation, and the second died four days after operation from peritonitis. In the last six cases there has been but one death with which the operation might be associated. This patient died two months after operation. She was a syphilitic.

Treatment of Cancer of the Tongue

DR. CURTIS F. BURNAM, Baltimore: Complete removal of the tongue is unjustifiable in early cases, and usually useless and harmful in advanced cases. The sum total of removals in extensive neck metastases, when the disease is outside the glands, does much more harm than good. Between 1916 and 1920, nearly all our operable cases were treated by operation and radium employed externally as an adjunct to the treatment. During these years a large number of inoperable cancers were treated by needling, local applications in the mouth, and heavy distance irradiation from the surface. In spite of shrinkage of growth, sometimes disappearance in the tongue and undoubted amelioration of symptoms, the results were nevertheless disappointing, for there were no cures. It is only fair to say that the technics employed in these cases were not nearly so theoretically good as those which we could employ now. Since 1920, we have taken up again the treatment of early operable cases with radium, and we agree with Dr. Quick that radium has a much more definite field in treating the tongue and mouth lesions than has surgical removal. This advance in radium therapy has been made possible by the bare tube technic. It is possible by this method to eradicate, not only small and moderate sized tongue lesions, but also very large ones in a high percentage of cases treated.

Gastrojejunocolic Fistulas Following Gastro-Enterostomy

DR. CHARLES H. MAYO, Rochester, Minn.: Six cases of gastrojejunocolic fistulas were observed among 101 gastrojejunal ulcers at the Mayo Clinic. A definite syndrome accompanied gastrojejunocolic fistulas, and their existence can be revealed by the roentgen ray in practically all cases. The onset of symptoms may occur from five weeks to nine and one-half years after gastro-enterostomy. Usually symptoms develop within six months or a year. The fistula may be intermittently patent and closed. Pain is not of a definite character, but is usually lower than the pain accompanying duodenal ulcer, and often a palpable mass is produced by the scar tissue in the area involved. Diarrhea, wasting and fecal vomiting are prominent symptoms. The cause of the condition is obscure. Separation of the colon from the stomach with closure of the fistula may be the only treatment necessary. It may be advisable to undo the gastro-enterostomy, as patients with fistulas do not tolerate it well, and a pyloroplasty can be done after excising the original ulcer.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Diseases of Children, Chicago

January, 1922, **23**, No. 1

*Nature of Plantar Reflex in Early Life and Causes of Its Variations. W. M. Feldman, London.—p. 1.
*Can Yeast Be Used as a Source of Antineuritic Vitamin in Infant Feeding? A. L. Daniels, Iowa City.—p. 41.
Incidence of Protein Sensitization in Normal Child. M. M. Peshkin and W. L. Rost, New York.—p. 51.
*Unusual Exanthem Occurring in Infants. R. M. Greenthal, Ann Arbor, Mich.—p. 63.
Respiratory Exchange in Case of Biliary Atresia. G. B. Fleming, Glasgow, Scotland.—p. 66.
*Bacteriologic Studies of One Hundred and Sixty-Five Cases of Pneumonia and Postpneumonic Empyema in Infants and Children. A. B. Lyon, Boston.—p. 72.
*Congenital Tuberculosis; Report of Case. G. P. Pratt, Omaha.—p. 88.

Nature of Plantar Reflex in Early Life.—Feldman examined the plantar reflex of about 500 subjects from birth up to age of 7 years, the large majority being under 4 years. A response was obtained in 426 cases. The proportion between plantar flexion and dorsiflexion was approximately 4:1. As regards the age at which the plantar definitely becomes plantar flexor in type, Feldman does not agree with the conclusions of some observers that it depends on the age at which the child begins to walk, since not only does he find plantar flexion to be the prevailing response before the walking age, but he obtained it in a few cases either unilaterally or bilaterally, long after the child had begun to walk. Moreover, in the same infant either plantar flexion or dorsiflexion might be elicited at different times. The prevailing plantar response in early life is plantar flexion of the big toe, although when a dorsiflexion of the toe occurs it has not the same significance as a similar response in the adult. Bilateral plantar flexion is at all ages as common in girls as in boys, but bilateral dorsiflexion is at all age periods in infancy more common in girls than in boys. Bilateral dorsiflexion of the toes is commoner in cases with a subnormal temperature because, probably, in such cases there is a greater congestion of the spinal cord. Bilateral dorsiflexion is slightly more common in dolichocephalic than in brachycephalic infants, possibly because inhibitory control is less powerful in the former than in the latter.

Yeast as Source of Antineuritic Vitamin.—In her experiments with yeast Daniels used from 2 to 10 gm. air dried pulverized yeast (Fleischmann's) soaked in a small amount of water, subsequently boiled and added to the day's feeding. In certain instances, when no gain in weight resulted from the yeast additions, wheat embryo extract (50 c.c.) was substituted for the yeast, in order to make sure that the failure to gain was not due to a lack of the antineuritic vitamin. In some cases the wheat embryo extract was added for therapeutic purposes. The most noticeable general effects of the yeast additions, especially with younger babies, was the change in the number and character of the stools, a formed "safe" stool often becoming diarrheal. In many instances not only was the character of the stool changed, but the number per day was greatly increased even when comparatively small amounts of yeast were used. These frequent diarrheal stools were in a number of cases followed by sudden losses in weight. The results were sometimes so disastrous that it was necessary to institute corrective measures at once. Altogether, Daniels' experience with yeast points to the conclusion that it should not be used as a means of increasing the antineuritic content of infants' foods.

Unusual Exanthem in Children.—The cases seen by Greenthal were characterized by an acute illness, with high fever, lasting from three to four days. The temperature then fell quickly to normal, and with the subsidence of the fever an eruption appeared lasting from one to three days. The patients were all infants whose ages ranged from 9 months to 2 years. Only one member of a family contracted the disease.

Bacteriology of Pneumonia in Children.—In the cases of lobar pneumonia, or empyema following, studied by Lyon, pneumococcus Type IV predominated with Type I a close second; 37.7 and 29.9 per cent., respectively. It is suggested that the etiology of lobar pneumonia in infants and children follows in a general way that in adults for a given community at a given time. Studies of comparative mortality suggest that the child possesses a better natural immunity against pneumococcus, type for type, than does the average adult. In bronchopneumonia the fixed types of pneumococcus are much less common than in lobar pneumonia. There has been an extraordinary tendency to the development of empyema in infections with pneumococcus Type I. Nearly 38 per cent. of pneumonias charged to this type developed this complication. Numerically it outranks any other cause of empyema in this series by about six times. This phenomenon bears not relation to the administration of serum.

Congenital Tuberculosis.—Pratt relates the case of a pregnant woman whose condition was diagnosed clinically as acute miliary tuberculosis. As no time could tubercle bacilli be demonstrated in the scanty sputum. She died. The necropsy revealed a generalized distribution of characteristic miliary tubercles in all the organs but most numerous in the lungs, making the case a predominant pulmonary form of miliary tuberculosis. The uterus was markedly enlarged, soft, congested and corresponded in size to that of a five months pregnancy. A distinct increase of straw-colored fluid was found in the fetal peritoneal cavity. Smears of this were negative for the bacillus of tuberculosis. No evidence of miliary tubercles was found in the abdominal cavity. The liver was somewhat enlarged and section was made of it in a dry field under aseptic precautions. Smears were made of scrapings from the cut surface and in these smears occasionally tubercle were found with Ziehl-Neelsen's carbolfuchsin stain. Similar smears were made from the placental cut surface before complete fixation, and prolonged search of these failed to reveal any tubercle bacilli. The finding of the tubercle bacilli in the fetal liver establishes this as a proven case of congenital tuberculosis.

American Journal of Hygiene, Baltimore

September-November, 1921, **1**, Nos. 5-6

*On Longevity of Human Intestinal Protozoan Cysts. W. C. Boeck, Baltimore.—p. 527.
*Disinfecting Skins and Hair for Anthrax. H. F. Smyth, Philadelphia.—p. 541.
Investigations on Control of Hookworm Disease. W. W. Cort, Baltimore.—p. 557.
*Five Species of Tsutsugamushi (Carrier of Japanese River Fever) and Their Relation to Tsutsugamushi Disease. M. Nagayo, Y. Miyagawa, T. Mitamura, T. Tamiya and S. Tenjin, Tokyo, Japan.—p. 569.
Vitality of Peoples of America. R. Pearl, Baltimore.—p. 592.

Longevity of Intestinal Protozoan Cysts.—The longevity was determined by Boeck of four different species of human intestinal protozoan cysts, under two different environments. Immersed in distilled water, contained in bottles and kept at a temperature of 12 to 22 C., cysts of *E. histolytica* were found viable at the end of 153 days; *E. coli* at the end of 244 days; *Giardia intestinalis* at the end of thirty-two days and *Chilomastix mesnili* at the end of 187 days. In eosin stained wet preparations, sealed with petrolatum, cysts of *E. histolytica* were viable at the end of 211 days; *E. coli*, 124 days; *Giardia intestinalis*, sixty-six days and *Chilomastix mesnili* at the end of 232 days. The cysts of *E. histolytica* and *E. coli* are infectious for man two and ten days, respectively, after their passage from the human body, and the cyst of *Giardia intestinalis* for kittens, after seventy-four days. In the absence of more definite information regarding the period of infectivity, all prophylactic measures against the dissemination of protozoan diseases should aim to prevent the access of flies to feces and to destroy the feces within two days after their defecation.

Disinfecting Horse Hair for Anthrax.—Smyth states that anthrax infested horse hair can be satisfactorily disinfected by several methods: (*a*) by steam under pressure in the autoclave (15 pounds) for thirty minutes; (*b*) by dry heat (200 F.) for twenty-four hours; (*c*) by formaldehyd.

Tsutsugamushi Carrier.—While there are at least five species among the mites which have been defined as tsutsugamushi, only one of these species, *Trombiaila akamushi*, is of significance in the occurrence of human tsutsugamushi disease.

American Journal of Medical Sciences, Philadelphia

December, 1921, **162**, No. 6

*Acute Cerebellar Encephalitis (Acute Cerebellar Ataxia). J. P. C. Griffith, Philadelphia.—p. 781.
*Clinical Studies in Functional Disturbances. N. G. Russell, J. A. P. Millet and B. D. Bowen, Buffalo.—p. 790.
*Clinical Classification on Asthma Based on Review of Six Hundred and Forty-Eight Cases. F. M. Rackemann, Boston.—p. 802.
*Treatment of Auricular Fibrillation by Quinidin Sulphate. C. C. Wolferth, Philadelphia.—p. 812.
*Nonspecific Wassermann Reactions in Diabetes Mellitus. E. H. Mason, Montreal, Canada.—p. 828.
*Lead Poisoning, with Special Reference to Poisoning from Lead Cosmetics. M. Barron and H. C. Habein, Minneapolis.—p. 833.
*Analysis of Cases of Cancer of Stomach; Incidence of Preexisting Ulcer.—p. 863.
Relation Between Poliomyelitis and Epidemic (Lethargic) Encephalitis. W. B. Cadwalader, Philadelphia.—p. 872.
Meningococcus Septicemia. W. A. Bloedorn, U. S. Navy.—p. 881.
Morphology of Heart in Relation to Habitus and New Method of Estimating Morphologic Changes. S. Hirsch and L. L. Shapiro. —p. 892.

Acute Cerebellar Encephalitis.—Thirty-one cases, including four of his own, are analyzed by Griffith. In only two cases was a necropsy performed, hence little is known regarding the actual lesions present. The disquieting element is that in about one quarter of the cases there was at the last observation some evidence of mental defect.

Functional Disturbances.—A clinical and functional study is presented by Russell and associates. Of eighty-five cases showing symptoms either definitely attributable to disturbance of the endocrine glands, particularly the thyroid, or not readily explainable on any other basis. The functional tests employed were the basal metabolism glucose tolerance and epinephrin sensitivity tests. The cases studied were divided into four groups: hyperthyroid, hypothyroid, fatigue and a large miscellaneous group. Clinical methods were found satisfactory in the diagnosis of frank hyperthyroidism, myxedema and to a lesser extent in the third and fouth groups. In apparent hypothyroidism—not myxedematous in type, however—the ordinary clinical methods usually failed to suggest the probable diagnosis. In such cases the diagnosis was made entirely on the basis of a deceased basal metabolic rate, together with definite improvement after the administration of thyroid extract. Of the functional tests used the basal metabolism was the only one to yield uniform results, which could be reasonably interpreted in association with the clinical findings and subsequent progress of the cases studied. Both of the other tests yielded positive results in almost all cases of hyperthyroidism, but the frequency of similar responses in a variety of other conditions, in some of which the diagnosis of hyperthyroidism was not even a remote possibility, necessarily detracts from their value as specific tests of thyroid function. Special emphasis is laid on three points brought out by the data obtained. These are: (1) That there are some cases showing definite hypersensitiveness to epinephrin and intolerance to glucose who tolerate thyroid extract well and improve under its administration; (2) that it is dangerous to attribute much importance to a positive epinephrin response in the diagnosis of suspected hyperthyroidism, and (3) a corollary of the point just mentioned that an occasional case of classical exophthalmic goiter showing marked increase of the basal metabolic rate may exhibit no hypersensitiveness to epinephrin.

Classification of Asthma.—The classification of asthma presented by Rackemann is: (*a*) pollen hay-fever and asthma; (*b*) dust asthma; (*c*) food idiosyncrasy; (*d*) bacterial asthma, and (*e*) reflex asthma. Cases from each group are analyzed.

Quinidin Sulphate in Auricular Fibrillation.—Of the twelve cases of auricular fibrillation treated with quinidin sulphate by Wolferth the normal rhythm was restored in seven, the fibrillation converted to flutter in one, while in four the treatment failed to abolish the fibrillation. In two cases there was no clinical benefit from the restoration of normal rhythm, as the fibrillation was reestablished within two weeks. In two others the results might be regarded as moderately successful. Fibrillation was abolished for periods of several weeks and the patients stated that they felt better during that time. But in both fibrillation returned and was much more refractory to a second course of treatment, although it was again possible to restore sinus rhythm temporarily. In three cases the results of quinidin therapy were excellent. The dosage varied somewhat, but the first dose was 0.2 gm. twice daily. The dosage varied up to 0.6 gm. three times daily.

Wassermann Reaction in Diabetes.—In a series of 168 cases of diabetes mellitus, Mason says, two cases have been observed which gave strongly positive blood Wassermann reactions, there being no history or other signs or symptoms of a specific infection. Both patients were treated for their supposed syphilitic infection over a short period of time, with marked and rapid decline of carbohydrate tolerance.

Lead Poisoning from Cosmetics.—In the cases reported by Barron and Habein a powder containing pure lead carbonate ground to an impalpable powder used as a face powder, was responsible for the lead poisoning. It is urged that rigid laws be enacted prohibiting the sale of any compound containing lead for cosmetic purposes.

Ulcer Basis for Gastric Cancer.—An analysis of 182 carefully studied cases of cancer of the stomach shows that a history suggestive of preexisting ulcer was obtained in only 17 per cent. Reference of epigastric pain to the back occurred in 29 per cent. of the pyloric cancers, and of those with reference of pain to the back 80 per cent. had involvement of the pylorus. The age incidence for the beginning of "ulcer" symptoms in the ulcer-before-cancer cases had its apex two decades later than did a series of seventy-nine ulcer cases. This suggests either that ulcers first giving rise to symptoms in middle life have a far greater likelihood of becoming malignant than do ulcers generally or that the ulcer-before-cancer cases are really malignant from the beginning. Either of these considerations justifies and indicates prompt and radical surgical treatment of all patients first developing symptoms suggestive of ulcer after 40 years of age. The average free hydrochloric acid and total acidity findings in the pyloric cancers was not abnormally low (15.5 and 45), but there was evidence of definite retention. There was also retention in some of those with lesser curvature involvement. When the cancer was situated elsewhere retention did not occur, but the acid figures were distinctly low. Roentgen-ray study gave a positive diagnosis in 96.8 per cent. and in but one case was it misleading. At operation the tumors were shown to be somewhat more extensive and more often to involve the lesser curvature than the roentgen ray suggested.

American Journal of Physiology, Baltimore

January, 1922, **58**, No. 3

Blood Fibrin Studies. D. P. Foster and G. H. Whipple, San Francisco. I. Method for Quantitative Analysis of Blood Fibrin in Small Amounts of Blood.—p. 365.
II. Normal Fibrin Value and Influence of Diet.—p. 379.
III. Fibrin Values Influenced by Transfusion, Hemorrhage, Plasma Depletion and Blood Pressure Changes.—p. 393.
*IV. Fibrin Values Influenced by Cell Injury, Inflammation, Intoxication, Liver Injury and Eck Fistula.—p. 407.
Effect of Repeated Rotation on Duration of After-Nystagmus in Rabbit. S. S. Maxwell, U. L. Burke and C. Reston, San Francisco.—p. 432.
Contour of Ventricular Volume Curves Under Different Conditions. C. J. Wiggers and L. N. Katz, Cleveland.—p. 439.
Action Currents in Stomach and Intestine. W. C. Alvarez and L. J. Mahoney, San Francisco.—p. 476.

Fibrin Values Affected by Tissue Injury.—According to Foster and Whipple tissue injury and inflammation exert a powerful stimulus on fibrinogen production and cause prompt and notable increase in fibrin values. Bacteria are not directly concerned in this reaction, which is identical whether a sterile or septic inflammation is present. All available data point to the liver as the only potential source of fibrinogen in the body.

American Review of Tuberculosis, Baltimore

December, 1921, **5**, No. 10

Tuberculosis Problem; Its Solution. A. K. Krause, Baltimore.—p. 769.
Antituberculosis Campaign in West Riding of Yorkshire, England. J. B. McDougall, Wakefield, Eng.—p. 784.

Institutional Treatment of Tuberculosis: Its Limitations. A. F. Miller, Kentville, Nova Scotia.—p. 801.
Seven Years' Experience with Artificial Pneumothorax. A. F. Miller, Kentville, Nova Scotia.—p. 809.
*Tuberculous Pyopneumothorax Treated with Methylene Blue. J. Rosenblatt and B. F. Stivelman, Bedford Hills, N. Y.—p. 819.
Safe Removal of Tonsils by Desiccation Method with High Frequency Current in Poor Surgical Risks, with Especial Reference to Tuberculosis. P. P. McCain, Sanatorium, N. C.—p. 824.
*Uterine Tuberculosis Associated with Uterine Neoplasm. J. R. Scott, Vermillion, S. D.—p. 829.
*Theoretic Considerations on Application of Ultraviolet Radiation in Tuberculous Laryngitis. E. Mayer, Saranac Lake, N. Y.—p. 835.
Determination of Clinical Activity in Pulmonary Tuberculosis from Roentgenograms. G. G. Ornstein and H. L. Sampson, Trudeau, N. Y.—p. 842.
Tuberculosis Versus Influenza. J. J. Singer, St. Louis.—p. 851.

Methylene Blue in Tuberculous Pyopneumothorax.—Rosenblatt and Stivelman report two cases of tuberculous pyopneumothorax in which they injected a saturated alcoholic solution of methylene blue with good results. Three c.c. is injected at a time until sterilization is effected.

Tuberculosis of Uterus and Polyp.—In Scott's case the dominant symptom was an excessive loss of blood at the menstrual epochs, which has shown a tendency to increase with succeeding periods. This is accompanied by severe pain in the lumbar region, necessitating the patient being confined to her bed during the epochs. These periods last about ten days, during the last two or three days of which the flow gradually decreases. There also is evident a feeling of weight in the pelvis, which is accentuated at the periods. The lungs were negative and the vulva gaping. There was a noticeable loss of tone in the perineum. A clinical diagnosis was made of anteflexion of the uterus, probably due to the relaxation of the perineum. An operation for repair of the perineum was undertaken, previous to which a routine curettage was performed. Microscopic examination of the curettings revealed a mucous polypus, 3 by 1.5 by 1 cm. Sections of the curettings revealed a number of tuberculous ulcers, together with a few miliary tubercles. Sections from the polypus also showed the characteristic picture of tubercle. Sections stained for tubercle bacilli revealed a small number of acid-fast rods. The convalescence was uneventful, the patient being discharged in a satisfactory condition. She returned after several weeks, complaining of a loss of weight and a feeling of fatigue, with a distressing cough. Physical examination at this time revealed a suspicious area in the right apex, which was demonstrated in roentgenograms. The sputum however was negative for tubercle bacilli on repeated examinations.

Ultraviolet Rays in Tuberculous Laryngitis.—Theoretically, Mayer believes it is justifiable to expect that ultraviolet radiation, of sufficient intensity to produce focal reactions, can stimulate healing of tuberculous laryngitis. Impressions thus far obtained by this form of treatment by direct application of the rays are encouraging.

Boston Medical and Surgical Journal

Jan. 12, 1922, **186**, No. 2

Challenge of Chronic Patient to Medical Profession. J. E. Goldthwait, Boston.—p. 31.
*Diagnosis of Heart Disease with Especial Reference to Its Importance in Preventive Medicine. P. D. White, Boston.—p. 34.
Problems for Cardiovascular Investigation. S. A. Levine, Boston.—p. 38.
*Common Pulmonary Diseases Confused with Tuberculosis. E. O. Otis, Boston.—p. 41.
*Postdiphtheritic Disseminated Myelitis, Report of Case. H. Powers, Brookline, Mass.—p. 45.
Abnormal Menstrual History, Followed by Pregnancy. C. J. Kickham, Boston.—p. 47.

Diagnosis of Heart Disease.—To determine disorders of the heart beat, White says clinical observation may often suffice if one is familiar with the findings of premature beats, heart block, auricular fibrillation and pulsus alternans; but very often graphic records—the electrocardiogram and arteriogram—are essential to clear up the situation. And finally, in the discovery of the very important condition of intraventricular block the electrocardiogram alone will suffice.

Pulmonary Diseases Confused with Tuberculosis.—Otis points out that there are a certain number of cases of lung condition which can only be diagnosed after long and careful observation, and although there may be a certain amount of evidence pointing toward tuberculosis, it is unjust and often cruel to the patient to make a definite diagnosis of tuberculosis without good and sufficient evidence to support such a diagnosis.

Postdiphtheritic Disseminated Myelitis. — Disseminated myelitis or sclerosis following diphtheria is reported only seven time in the literature. Powers adds one case: the only one in which antitoxin was given. The picture of disseminated myelitis was complete, but apparently in this case, myelitis has not terminated in sclerosis. The patient made a complete recovery.

Canadian Medical Association Journal, Toronto

December, 1921, **11**, No. 12

Malignant Disease of Throat. W. S. Syme, Glasgow.—p. 887.
Experiences of an Otologist in France (1915-1919). J. K. M. Dickie, Ottawa.—p. 893.
What Does Public Health Administration Embrace? W. H. Hattie, Halifax.—p. 900.
Relation of General Medicine to Mental Medicine. A. T. Mathers, Winnipeg, Man.—p. 904.
Chlorination of Small Water Supplies. F. B. Jones, Montreal.—p. 908.
Treatment of Acute Pelvic Inflammation in Female. E. R. Secord, Braatford, Ont.—p. 910.
Roentgen-Ray Diagnosis of Gastric and Duodenal Ulcer. L. R. Hess, Hamilton.—p. 914.
Prognosis and Diagnosis in Tuberculosis as Aided by Serology. W. E. Ogden, Toronto.—p. 918.
Cancer of Stomach. J. C. Masson, Rochester, Minn.—p. 924.
Surgery of Gallbladder and Biliary Ducts. E. S. Judd, Rochester, Minn.—p. 929.
Etiology of Rickets. F. F. Tisdall, Toronto.—p. 934.
Recent Advances in Our Knowledge of Alkaloids of Opium. H. G. Barbour, Montreal.—p. 944.
Surgery in Treatment of Pulmonary Tuberculosis. E. W. Archibald, Montreal.—p. 945.
Bronchial Asthma. A. T. Henderson, Montreal.—p. 947.
Traumatic Aneurysm. C. K. P. Henry, Montreal.—p. 949.
Case of Gauze in Intestine. G. W. T. Farish, Yarmouth, N. S.—p. 950.

Florida Medical Association Journal, St. Augustine and Jacksonville

December, 1921, **8**, No. 6

Vital Statistics and Medicine. S. R. Roberts, Atlanta, Ga.—p. 93.
Fractures of Femur. J. S. Turberville, Century, Fla.—p. 96.

Illinois Medical Journal, Oak Park

January, 1922, **41**, No. 1

Thyroid Gland and Toxemias—with Special Relation to Intestinal Statis. W. S. Bainbridge, New York.—p. 1.
*Acidosis in Surgical Anesthesia. M. E. Rose, Decatur, Ill.—p. 6.
Psychic Factor in Anesthesia. J. R. Eastman, Indianapolis.—p. 9.
Principle of Basal Metabolism Test. H. Swanberg, Quincy, Ill.—p. 15.
Refinements in Operation for Senile Cataract. C. B. Welton, Peoria, Ill.—p. 19.
Precautions Necessary to Avoid Accidents in Cataract Extraction. W. A. Fisher, Chicago.—p. 23.
Diagnostic and Therapeutic Value of Nonsurgical Biliary Tract Drainage in Patients Exhibiting Bilary Tract Disease on Whom Surgical Procedures Have Been Performed Previously. F. Smithies and R. B. Oleson, Chicago.—p. 29.
Two Problems in Bronchoscopy and Their Solution. G. W. Bout, Chicago.—p. 36.
Paternalism, Most Subtle and Sinister Enemy of Popular Government. F. L. Greene, St. Albans, Vt.—p. 38.
Present Situation with Regard to Narcotic Addiction in U. S. R. G. Perkins, Cleveland.—p. 44.
Plea for More Thorough Routine Back Examination. J. H. Bacon, Peoria, Ill.—p. 47.

Acidosis in Surgical Anesthesia.—An attempt was made by Rose to determine whether procain, the most widely used local anesthetic, produces a decrease in the alkali reserve of the blood. The work was done on thirty-eight surgical patients, the operations including herniotomy, hysterectomy, nephrectomy, cholecystectomy, thyroidectomy, appendectomy, etc. A 0.5 per cent. solution of procain with epinephrin, 4 drops of 1:1,000 solution to the ounce, was used as the anesthetic in all cases. Twenty-two patients, or 58 per cent., showed no decrease in the blood bicarbonate after operation. Sixteen, or 42 per cent., showed a decrease varying from 1.5 to 10 volumes per cent., the average decrease being 4.5 volumes per cent. In all cases, however, the average fall was 1.9 volumes per cent.

Indiana State Medical Association Journal, Fort Wayne

December, 1921, **14**, No. 12

Ulcer of Stomach and Duodenum. Etiology and Pathology. B. W. Rhamy, Fort Wayne.—p. 405.
Id. Diagnosis and Treatment. W. H. Foreman, Indianapolis.—p. 409.
Id. Surgical Treatment. J. R. Eastman, Indianapolis.—p. 414.
Physician. "Rejuvenation of Medical Ethics." F. B. Wynn, Indianapolis.—p. 422.

Johns Hopkins Hospital Bulletin, Baltimore

January, 1922, **33**, No. 371

*Secondary Anemia of Infants: Study of So-Called Infantile Splenic Anemia or Anemia Infantum Pseudoleukemica. F. A. Evans and W. M. Happ, Baltimore.—p. 1.
Pregnancy and Labor in Young Primiparae. J. W. Harris, Baltimore.—p. 12.
*Protective Power of Serum in Pernicious Anemia and Other Conditions Against Hemolysis by Saponin and by Sodium Oleate. R. H. Zinck, H. M. Clark and F. A. Evans, Baltimore.—p. 16.
*Establishment of Collateral Circulation Following Ligation of Thoracic Duct. F. C. Lee, Baltimore.—p. 21.
Studies on Experimental Rickets. XV. Effect of Starvation on Healing of Rickets. E. V. McCollum, N. Simmons, P. G. Shipley and E. A. Park, Baltimore.—p. 31.

Secondary Anemias of Infants.—When the cases of anemia in infants reported here by Evans and Happ were examined in detail, it was seen that, although some of the features presented were common to all the patients, other varied within wide limits. Diminution in the number of red blood cells and in the hemoglobin percentage, anisocytosis, poikilocytoses and basophilia were present in all, and, in general, the severity of these changes varied with the severity of the anemia. All of the patients also showed at least a slight relative increase in cells of the large mononuclear-transitional cell group. Variations in the number and character of the platelets present from time to time were essentially the same in all cases. However, the degree of anemia, the total white blood cell count, the differential white blood cell formula, the presence of immature cells, enlargement of the spleen, liver and lymph nodes, the presence of rickets, the signs of prematurity, and the kind of feeding employed varied within wide limits. The blood pictures in these cases showed three major types of reaction, or various combinations of them. Type I.—The blood changes resembled somewhat those seen in simple secondary anemia of adults; that is, there were no immature forms and no increase of lymphocytes. Type II.—The blood showed, in addition to the changes of Type I, an increase in the relative proportion of lymphocytes. Type III.—The blood showed, as the most pronounced change, immature cells of all types. There was also in these cases some increase in the percentage of lymphocytes. It would seem, therefore, that the simple anemias of infants differed in blood picture from those of adults chiefly by reason of two special reactions, lymphocytic increase and the presence of immature cells. Either one of these might be present alone and in different degrees, or both be found, the relative importance of one toward the other also the subject of wide variation.

Protective Power of Serum in Pernicious Anemia Against Hemolysis.—The serums of patients with hemolytic anemia and other conditions in which the liver and spleen are prominently involved in the disease process, as compared with the serums of normal persons and of patients not suffering with either of these maladies showed a marked diminution in protective power against hemolysis by saponin, and by sodium oleate. Zinck and her associates conclude that saponin is a hemolytic agent foreign to the body, and sodium oleate is one that is probably present in the body normally.

Establishment of Collateral Circulation Following Ligation of Thoracic Duct.—After reviewing the literature on the experimental ligation of the thoracic duct, an intrathoracic method is described by Lee for complete ligation of the thoracic duct in the cat. It seems that the integrity of the thoracic duct is not essential to the life of the animal. In some cases in which the ligation was absolute, collateral lymph circulation was established to the right thoracic duct; while in other cases which showed complete ligation, lymphaticovenous connections were found to exist between the thoracic duct and the azygos vein. The embryology of the lymphatic system may explain partly, but not entirely, these findings which also have a bearing on studies of fat absorption as well as on the clinical aspect of injuries to the thoracic duct.

Effect of Starvation on Rickets.—The authors observed that when young rats with rickets are made to fast for periods of from three to five days (distilled water only being offered), healing begins in exactly the same way as it does when suitable amounts of cod liver oil are administered. The good effects of fasting are given a new meaning, because the organism is able to adapt itself to pathogenic distortions of normal metabolic ratios when the burden of carrying on exogenous metabolism is removed. Since the starving body is capable of readjusting abnormal relations within itself it is easy to understand the benefit derived by a diabetic from occasional hunger days, and why it is that the wasted anthreptic infant does not develop rickets. Rickets has certain of the characteristics of a deficiency disease because a certain substance contained in cod liver oil and elsewhere corrects an anatomical condition which develops when the calcium and phosphorus in the diet are present in wrong proportions. Yet rickets has a feature entirely distinct from beriberi, scurvy, and xerophthalmia. The relation between two inorganic elements determines the extent of the animals' need for the organic factor which cod liver oil furnishes. No such relationship between a vitamin and any other food substance has been clearly demonstrated in any other condition.

Journal of Biological Chemistry, Baltimore

December, 1921, **49**, No. 2

*Relation Between Chlorid Content of Blood and Its Volume Per Cent. of Cells. A. Norgaard and H. C. Gram, Copenhagen, Den.—p. 263.
*New Method for Determination of Fibrin Percentage in Blood and Plasma. H. C. Gram, Copenhagen, Den.—p. 279.
Further Study of Respiratory Processes in Mya Arenaria and Other Marine Mollusca. J. B. Collip, St. Andrews, Can.—p. 297.
*Sulphates in Blood. W. Denis, New Orleans.—p. 311.
*Creatin Formation in Case of Progressive Pseudohypertrophic Muscular Dystrophy. R. B. Gibson and F. T. Martin, Iowa City.—p. 319.
Action of Nitrous Acid on Casein. M. S. Dunn and H. B. Lewis, Urbana, Ill.—p. 327.
Comparative Study of Hydrolysis of Casein and Deaminized Casein by Proteolytic Enzymes. M. S. Dunn and H. B. Lewis, Urbana, Ill.—p. 343.
Determination of B-Hydroxybutyric Acid. R. S. Hubbard, St. Louis.—p. 351.
*Determination of Acetone Bodies in Urine. R. S. Hubbard, St. Louis.—p. 357.
Determination of Acetone Bodies in Blood. R. S. Hubbard, St. Louis.—p. 375.
Blood Acetone Bodies After Injection of Small Amounts of Epinephrin Chlorid. R. S. Hubbard and F. R. Wright, New York.—p. 385.
*Some Nutritive Properties of Nuts. II. Pecan Nut as Source of Adequate Protein. F. A. Cajori, Palo Alto, Calif.—p. 389.
*Studies on Experimental Rickets. IX. Lesions in Bones of Rats Suffering from Uncomplicated Beri-Beri. P. G. Shipley, E. V. McCollum and N. Simmonds, Baltimore.—p. 399.
Ammonia Excretion Following Experimental Administration of Acids via Stomach and Peripheral Vein. R. W. Keeton, Chicago.—p. 411.
*Composition of Chinese Edible Birds' Nests and Nature of Their Proteins. C. C. Wang, Chicago.—p. 429.
Isolation and Nature of Amino Sugar of Chinese Edible Birds' Nests. C. C. Wang, Chicago.—p. 441.
Animal Calorimetry. Behavior of Various Intermediary Metabolites on Heat Production. G. Lusk, New York.—p. 453.
Animal Calorimetry. XIX. Influence of Acids on Carbon Dioxid-Combining Power of Blood Plasma. S. A. Taistra, New York.—p. 479.
Animal Calorimetry. Influence of Ingestion of Meat and of Glycine and Alanine on Carbon Dioxid-Combining Power of Blood Plasma. A. Chanutin, New York.—p. 485.
*Micro Determination of Calcium in Whole Blood, Plasma and Serum by Direct Precipitation. G. W. Clark, Berkeley, Calif.—p. 487.
Fate of Sulphids in Blood. H. W. Haggard and T. J. Charlton, New Haven, Conn.—p. 519.

Chlorid Content of Blood.—In fifty-two cases of various types Norgaard and Gram found that the content of sodium chlorid in the plasma is nearly constant, about 0.61 per cent. The corresponding chlorid determinations on whole blood show that these values vary greatly. The chlorid percentage in blood increases when the cell volume percentage (and hemoglobin) drops, and vice versa; these changes following certain laws, which are formulated. The chlorid content of the blood corpuscles is nearly constant, about 0.31 per cent., the only serious divergence being found in pernicious anemia, where the average content is calculated to be 0.23 per cent.

Determination of Fibrin in Blood.—A technic is described by Gram by which the fibrin percentage in blood and plasma may be determined from 5 c.c. of citrated blood (0.5 c.c. of 3 per cent. citrate + 4.5 c.c. of blood). This includes a determination of the cell volume. On the same specimen one may determine the platelet count by Thomsen's method and the coagulation time by a method indicated by the author.

Sulphates in Blood.—The inorganic sulphates of blood, as determined by a new and simple method, a description of which is given by Denis, is found to amount to from 1.8 to 4.0 mg. of sulphur per 100 c.c. blood in the case of various species of animals and from 1.0 to 0.5 mg. in normal human blood. In nephritics with nitrogen retention there is also found a retention of inorganic sulphate, figures as high as 12 and 16 mg. having been obtained.

Creatin Formation in Progressive Muscular Dystrophy.—Ingested creatin was promptly and completely eliminated chiefly as creatin, in part as creatinin, in an advanced progressive pseudohypertrophic muscular dystrophy case described by Gibson and Martin. The creatin and to a lesser extent the creatinin excretion was increased as the result of a greater protein intake. This increase is obtained only from the protein that catabolized, including gelatin, and not from that retained for growth purposes. Preformed creatin in the diet was not an important factor to be considered in interpreting the results. The substitution of the arginin-rich protein edestin for 0.8 of the protein of the diet failed to increase the creatin excretion. Hordein added to the diet increased the total nitrogen and urea elimination, but probably was without effect on the creatin; this observation is indicative only. Ingested sarcosin and asparagin did not lead to an increase in the creatin excretion. Glycocyamin was converted in part (at least 36 per cent.) into creatin. It is probably not a stage in ordinary creatin formation. Experiments with cystin have been negative.

Determination of Acetone in Urine.—A method is described by Hubbard for the determination of the acetone bodies in normal urine, which gives a good percentage of recovery for substances added, and which is particularly applicable for the analysis of normal urines. It gives low values for normal urines, but not lower than some already included in the literature. Duplicates agree well, and determinations when carried out by two distinct methods of final analysis show satisfactory agreement. In addition, two cases are presented in which the gradual development of acetonuria was brought about, and a brief discussion is given of the relationship between the different acetone bodies under such conditions.

Nutritive Value of Pecan.—Cajori states that the principal protein of the pecan nut is a globulin. Feeding experiments on rats showed that the nut is a source of adequate protein.

Experimental Rickets.—According to Shipley, McCollum and Simmonds, rats fed on a diet complete except for the absence of the antiberiberi factor, develop lesions in the bones which are essentially identical with those seen in guinea-pigs suffering from acute and uncomplicated scurvy. Rats confined to the same diet supplemented with water-soluble B do not show these changes. The bones of rats on a diet which is only deficient in the fat-soluble A are osteoporotic, but have no other resemblance to the bones of scorbutic animals.

Composition of Edible Chinese Birds' Nests.—Wang shows that the Chinese edible birds' nest has the properties of a protein as well as those of a carbohydrate. It belongs, therefore, to the class of glycoprotein. Its percentage composition resembles that of salivary mucin. It contains 10.29 per cent. nitrogen and at least 17.36 per cent. carbohydrate. Artificial digestion experiments indicated that the birds' nest was digested by both pepsin hydrochloric acid and trypsin at a slower speed than boiled egg. Feeding experiments indicate that the nest protein is probably of an inferior quality.

Determination Calcium in Blood.—Experimental data are presented by Clark to show that the micro method depending on the direct precipitation of calcium from serum, plasma and whole blood is accurate to ± 5 per cent., and equal in this respect to any of the numerous micro methods recorded in the literature. The direct method possesses several advantages not common to other procedures: (1) the small amount of sample necessary (1 to 5 c.c. of plasma, 5 c.c. of whole blood); (2) the saving in time (no ashing, protein precipitation, filtering, etc.); and (3) minimal mechanical loss, since all operations are carried out in one tube. With proper concentration of H ions (approximately that of normal sulphuric acid) and at an initial temperature of 75 C., small amounts of calcium may be estimated accurately (to approximately 2 per cent.) by titration of the oxalate with hundredth normal potassium permanganate.

Maine Medical Association Journal, Portland

January, 1922, **12**, No. 6

*Some Large Ureteral Calculi. L. G. Paul, Boston.—p. 147.
Diarrhea in Bottle-Fed Infants. H. E. Small, Fort Fairfield, Me.—p. 154.
Focal Infections. C. G. Dennet, Saco.—p. 158.

Large Ureter Calculus.—Paul reports a case in which two stones were lodged in the lower part of the left ureter. They were removed by an extraperitoneal operation. One stone weighed 259 grains and the other 96 grains. The larger stone was 7 cm. long and 2 cm. in diameter at its largest part; the smaller one measured 4.5 by 1.5 cm.

Medical Record, New York

Jan. 7, 1922, **101**, No. 1

Some Factors in Bone Repair. W. S. Bainbridge, New York.—p. 1.
Treatment of Raynaud's Disease with Thyroid Extract. E. W. Hirsch, Chicago.—p. 9.
Redemption of Internal Medicine with Reference to Improved Therapeutic Application. W. C. K. Berlin, Denver.—p. 12.
Fracture of Neck of Femur. S. Kleinberg, New York.—p. 14.
Few Thoughts on Prostatic Disease. A. W. Hammer, Philadelphia.—p. 15.
Compulsory Health Insurance. W. E. Hartshorn, New Haven, Conn.—p. 17.
Uses and Abuses of Pituitrin in Obstetrics. I. Josephson, New York.—p. 18.

Jan. 14, 1922, **101**, No. 2671

Pharmacology and Therapeutic Value of Alcohol. G. B. Wallace, New York.—p. 47.
Importance of Endocrine Therapy in Combination with Mental Analysis in Treatment of Certain Cases of Personality Deviation. E. R. Spaulding, New York.—p. 50.
Turpentine by Injection in Dermatology and Urology. J. L. Tenebaum, New York.—p. 54.
Cases of So-Called Tropical Granuloma Observed in Kings County Hospital. J. M. Winfield and L. D. Hoppe, Jr., Brooklyn.—p. 57.
Borderline Endocrine Cases. H. R. Harrower, Glendale, Calif.—p. 60.
Calcium Lactophosphate in Cyclic Vomiting. C. R. Green, Troy, N. Y.—p. 62.
Unexplained Constitutional Symptoms Caused by Foreign Body in Tissues. M. J. Schroeder, New York.—p. 63.

Jan. 21, 1922, **101**, No. 3

Syphilis and High Blood Pressure. B. P. Thom, New York.—p. 89.
Faulty Attitudes in Children. J. Grossman, New York.—p. 93.
Child Health in Europe. E. M. Josephson, Paris.—p. 101.
Bladder Bugs. A. Nicoll, New York.—p. 103.
Acute Infections in Sebaceous Glands and Hair Follicles of Nasal Vestibule. L. M. Hurd, New York.—p. 105.
Biochemical Explanation of Silica Molecule. P. R. Vessie, Gowanda, N. Y.—p. 106.

Michigan State Medical Society Journal, Grand Rapids

December, 1921, **20**, No. 12

Tuberculous Plueral Effusion. J. B. Jackson Kalamazoo.—p. 491.
Analysis of One Hundred and Fourteen Cases of Breech Presentation. M. Burnell, Fliat.—p. 494.
*Bacillus Coli Infection During Pregnancy and Puerperium. H. H. Cummings, Ann Arbor.—p. 497.
Cesarian Section: Report of Case. R. F. Webb, Grand Rapids.—p. 502.
*"Buried Loop" Operation for Shortening Round Ligaments of Uterus. J. N. Bell, Detroit.—p. 505.
Abdominal Angina. A. W. Crane, Kalamazoo.—p. 508.
Group Medicine or State Medicine? A. W. Blain, Detroit.—p. 510.

Colon Bacillus Infections During Pregnancy.—In the three cases cited by Cummings, *Bacillus coli* was the only etiologic agent demonstrated. A history of marked constipation was given by each patient. All three had suffered from attacks of pain in the right side of the abdomen. This condition had been diagnosed as appendicitis and two of the patients had had the appendix removed. In the two patients the onset of infection came between the third and fourth months of pregnancy, when the uterus would begin to encroach on the

ureters. Pyelitis was the earliest finding in these patients. The gallbladder was apparently involved in one case; the pleural cavity in two and both kidneys in two patients. The uterus was involved in only one patient. Cultures from the urine were positive for colon bacilli in all three cases; the blood was positive in one and the lochia in one. Two of the patients showed rapid improvement in the kidney findings after proper kidney drainage was established by the elevated Sims' position and the knee-chest position. In the third case these postural exercises were not used. All of the patients survived the infection. Two had living children at full term, while one had a premature labor at the seventh month, giving birth to a child that lived but three days.

Operation for Shortening Round Ligaments.—In Bell's operation the round ligaments are brought out through a perforation of the abdominal wall as in the Gilliam operation. A strip of rectus fascia from one-half to 1 inch in width is cut transversely internal to the loop of the ligament and dissected from the rectus. The fascial flap is drawn through the loop replaced in its original position and sutured there. Thus, the loop of the ligament is buried underneath the fascia and cannot escape to slide back into the abdominal cavity. The flap is cut to accommodate the length of loop.

Military Surgeon, Washington, D. C.

January, 1922, **50**, No. 1

History of Military Medicine. F. H. Garrison.—p. 1.
Restoration of Internal Table in Cranioplasty. A. M. Hanson, Haessly Hanson and Traeger, Faribault, Minn.—p. 31.
Progress of Pulmonary Tuberculosis. G. H. Crofton.—p. 32.
Our Responsibilities. M. H. Epstein.—p. 35.
Critique of Army Ration, Past and Present. J. R. Merlin.—p. 38.
Notes on American Mosquitoes. H. G. Dyar and C. S. Ludlow.—p. 61.

New Jersey Medical Society Journal, Orange

January, 1922, **19**, No. 1

Preventive Surgery. J. W. Draper, Trenton.—p. 1.
Toxic Thyroid. Treatment Under Ether-Oil-Colonic Anesthesia. G. K. Dickinson, Jersey City.—p. 10.
Did Experience and Training of Physician in Late War Prove a Benefit to Him? A. L. L. Baker, Dover.—p. 13.
American Medical Survey of Child Health in Galicia. L. Mitchell, Lemberg, Poland.—p. 14.

New York State Journal of Medicine, New York City

January, 1922, **22**, No. 1

Value of Radium in Gynecology. F. E. Kenne, Philadelphia.—p. 1.
Postoperative Use of Radium. E. A. Vander Veer, Albany.—p. 4.
*Epileptiform Manifestations in Endocrinous Disorders. S. A. Leahy, Brooklyn.—p. 8.
Pyelitis. H. D. Furniss, New York City.—p. 14.
*Therapeutic Suggestions in Treatment of Epilepsy. L. P. Clark, New York City.—p. 17.
Fear: A Harmful Emotion. How May We Eliminate It From Surgical Patient's Mind. D. Gutherie, Sayre, Pa.—p. 18.
Psycho-analytic Experiences with Freud. A. Stern, New York City.—p. 21.
Relation of Flexor-Adductor Foot Deformity to Diseases of Nervous System. W. M. Kraus, New York.—p. 25.
History of Dispensary Law. E. E. Harris, New York City.—p. 27.

Deficient Ovarian Secretion and Epilepsy.—In the seven cases cited by Leahy, there appeared to be a definite relation between deficient ovarian secretion and epileptiform attacks, and between dyspituitarism attended by deficient secretion and epileptiform attacks. Practically all of the cases showed more than one glandular involvement. Striking physical abnormality was absent, except in one case. There were four cases showing a small sella turcica, one of which showed in addition calcification of the pineal gland, and another calification of the posterior lobe of the pituitary gland. The cases showing dyspituitarism all showed the small sella turcica with the exception of one which showed the large sella turcica of acromegalic features. All these patients were given ovarian and thyroid extract with marked improvement in the majority of the cases and some improvement in the others.

Epilepsy.—Essential epilepsy, Clark says, is an organic disease of the whole personality, shown in a series of defects of instincts; these outstanding faults are summarized in egocentricity, supersensitiveness and emotional poverty. The fit is the maximum periodic manifestation of the disorder; it is a psychic regression phenomenon, a protective release of the mental mechanism from too intense physical and mental stress. The line of treatment is analytical, explanatory and a broadly reeducative one, physically and mentally.

Porto Rico Medical Association Bulletin, San Juan

Oct. 31, 1921, **15**, No. 133

*Differential Diagnosis of Tropical Pyrexias Most Commonly Observed in Porto Rico. A. Torregrosa.—p. 197. Cont'n.
Modern Ideas in Regard to Diet. R. del Valle Sárraga.—p. 220. Cont'd.
The Clinical Laboratory and Its Work. R. del Valle Sárraga.—p. 233.

Tropical Pyrexias.—In this eighth instalment of his comprehensive study of the differential diagnosis of the fevers liable to be encountered in Porto Rico, Torregrosa discusses the bilious-hemoglobinuric form of malaria and of yellow fever and their differentiation from spirochetal jaundice, acute yellow atrophy of the liver and hemorrhagic nephritis. He is inclined to include in the group of continuous and intermittent pyrexias of tropical climates colon bacillus enteritis and the typhoid group. This subgroup occurs in all countries, but under tropical conditions they seem to display an exaltation of their own special phenomena. Malaria of the pernicious type may display its virulence not only by hyperpyrexia, sweating and algid state, but by sets of symptoms deceptively resembling those of the most diverse diseases and functional disturbances of organs and apparatus. Pernicious malaria affecting the brain may simulate poliomyelitis or epidemic encephalitis, acute mania, epilepsy or sunstroke. The diagnosis in tropical countries is generally possible with remittent fever only after negative examination of the blood; in the continuous fever, malaria is usually thought of only after exclusion of other diseases.

He discusses further the fevers that are neither intermittent nor continuous, especially the irregular fever with helminths, dysentery, etc. Malaria may assume an irregular form, and with a dubious diagnosis the patient does not get enough quinin, which still further masks the malarial origin of the brief attacks at long irregular intervals, with euphoria in the intervals. The ascaris may be responsible for an irregular fever, especially in children, and it may induce a train of symptoms suggesting gallbladder or appendix disease; in one case the discovery of an ascaris in the stools just before the contemplated appendicectomy gave the clue for a complete cure under a vermifuge. In Porto Rico, convulsions, with or without fever, are frequently noted in children with ascaridiasis. In one such case the diagnosis of tuberculous meningitis had seemed inevitable, but lumbar puncture was negative and the symptoms all subsided after santonin. He adds that there is scarcely a physician in Porto Rico who has not seen cases of this kind. He warns further that the discovery of the ascaris does not necessarily imply that it is responsible for the symptoms observed unless the symptoms subside after expulsion of the helminths.

Southwestern Medicine, El Paso, Texas

January, 1922, **6**, No. 1

Keeping Faith. J. Vance, El Paso, Texas.—p. 1.
Fracture of Pelvis. Comments on Complications, Mortality and Ultimate Results. J. E. Bacon, Miami, Ariz.—p. 4.
Fractured Vertebrae. W. B. Bowman, Los Angeles.—p. 13.
Some Ocular Manifestations of Tuberculosis. H. H. Stark, El Paso, Texas.—p. 16.
Absorption and Elimination of Water in Relation to Abdominal Surgery. H. Shoemaker, Los Angeles.—p. 19.
Prognosis in Pulmonary Tuberculosis. J. E. J. Harris, Albuquerque, N. M.—p. 22.
Psychoneurosis, Incident to War Experience. S. D. Swope, Deming, N. M.—p. 26.

West Virginia Medical Journal, Huntington

December, 1921, **16**, No. 6

Abdominal Cesarean Section, with Report of Cases. C. F. Hicks, Welch.—p. 207.
Cesarean Section. W. H. Wallingford, Princeton.—p. 212.
Pilonidal Abscess. C. S. Hoffman, Keyser.—p. 220.
Some Minor Points of Major Importance to Surgeon. H. G. Nicholson, Charleston.—p. 222.
Trans-Duodenal Biliary Drainage. T. P. Sprunt, Baltimore.—p. 225.
Anesthesia by Oral Insufflation in Tonsillectomy. L. D. Norris, Fairmont.—p. 234.
Laity. J. A. Porter, Littleton.—p. 238.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

Archives of Radiology and Electrotherapy, London

December, 1921, **26**, No. 257

Problems of Physics. O. W. Richardson.—p. 205.
*Treatment of Infantile Paralysis. H. Bordier.—p. 215.
On Use of Perpendicular Pins and "Levelling Compass" in Localization. M. H. Knoch.—p. 220.
Malunited Abduction Fracture of Ankle Joint Treated by Operation. C. P. G. Wakeley.—p. 229.

Treatment of Infantile Paralysis.—Bordier claims that the prognosis of infantile paralysis is far from being so grave as certain practitioners think. Therapeutic results obtained by modern procedures, and in particular by diathermy, radiotherapy and galvanization, prove that infantile paralysis can be, if not completely cured, at least transformed into an affection which carries with it neither infirmities nor complete crippledom. The first therapeutic indication consists in acting on the medullary lesion by means of radiotherapy. Although radiotherapy does not pretend to reconstitute nerve cells which are completely atrophied, it must have the effect of reestablishing the cells incompletely destroyed and of arresting the progress of the poliomyelitis. The treatment must be undertaken as early as possible. The second indication is to combat the lowering of the temperature, not only of the atrophied muscles but of the limb to which these atrophied muscles belong. The most efficacious means to bring the temperature of a chilled limb to its normal amount is diathermy. When the affected limb is as warm as the other, electrical treatment must be commenced; this will be applied according to the results of the electrodiagnostic examination, and chiefly consists in rhythmic and reversed galvanization of the muscles presenting the reaction of degeneration complete or partial. This treatment must be followed carefully and persistently for months, or even for years, if necessary, if a satisfactory result is to be obtained in any of these cases.

Edinburgh Medical Journal

January, 1922, **28**, No. 1

Basal Metabolic Rate: Its Determination and Clinical Significance. J. Meakins and H. W. Davies.—p. 4.
*Wassermann Test in General Practice. A. Mills.—p. 19.
Cesarean Section: Its Indications and Technic. J. W. Ballantyne.—p. 28.

Wassermann Test in Inherited Syphilis.—Mills has found that a patient suffering from inherited syphilis may have a positive father and a positive mother, or a positive father and a negative mother. He has not yet met with one having a negative father and a positive mother. A positive father may propagate syphilitic children long after he has ceased to be directly infective to the mother. In an industrial school of which Mills is medical officer, 70 per cent. of the children are the subjects of inherited syphilis. Many patients display none of the orthodox cardinal signs. An infant may be suffering from inherited syphilis, though there be no history of rash, snuffles or condylomata. Inherited syphilis may manifest itself in a variety of other conditions, curable by antisyphilitic treatment, and these conditions were not recognized in the past as being caused by syphilis. The sole manifestation of inherited syphilis in an infant may be dietetic difficulties, with little or no increase in weight or with actual wasting. Inherited syphilis may explain recurring attacks of gastrointestinal disturbance in older children and in adults. In particular it may explain attacks of abdominal pain which may lead to a diagnosis of appendicitis, gallstones, Dietl's crisis, and probably of other acute abdominal conditions. Syphilis can produce in a young child a condition impossible to distinguish from tuberculous peritonitis. The external appearances of anemia of a persistent nature and not improved by medication with iron may be the sole manifestation of inherited syphilis. Syphilitic affections of bones, joints and glands are common. Epilepsy is frequently the result of syphilis. Miscarriages may be predisposed to by inherited syphilis. Anginal symptoms, not necessarily those of true angina pectoris, are naturally a frequent result of syphilis. His blood is definitely positive, and Mills states his respiratory trouble may be syphilitic in origin. A gummatous infiltration of the bronchi may produce bronchiectasis. Syphilis can give rise to as many symptoms as there are functions of the nervous system. Mills points out that the possibility of a child having acquired syphilis must not be forgotten.

Indian Medical Gazette, Calcutta

December, 1921, **56**, No. 12

Arsenical Dermatitis During Treatment with Arsphenamin. W. L. Harnett.—p. 441.
Psycho-Analysis and General Practitioner. O. A. R. Berkeley-Hill.—p. 443.
*Bronchomoniliasis. T. Sur.—p. 445.
Bilharzia in Mesopotamia. P. W. Harrison.—p. 449.
Case of Snake-Swallowing in Insane. P. C. Das.—p. 450.
Toxic Symptoms by Local Application of Belladonna. R. K. Ketkar.—p. 451.
Case of Bi-Lateral Cerebellar Abscess with No Localizing Symptoms. E. C. Spaar.—p. 451.
Novarsenobillon in Syphilitic Buboes and Chancre. T. Vadivelu.—p. 455.
Case of Intestinal Obstruction Attended with Internal Hemorrhage. S. L. Sen.—p. 455.
Case of Bacillus Coli Pericarditis. M. Ganguli.—p. 456.
Case of Rheumatic Adenitis. G. DeSilva.—p. 456.
Round Worm in Surgery. E. N. Graham.—p. 457.
Case of Pleuropneumonia Successfully Treated by Injection of Pneumonia Phylacogen. G. DeSilva.—p. 457.
Injection for Piles. A. Hooton.—p. 458.

Bronchomoniliasis.—The organisms found by Sur in his case consist of budding forms of yeastlike cells, resembling saccharomyces, but mycelial threads as well have always been found present. The filamentous hyphae show only intramycelial endospores but formation of ascus has never been observed. The budding and growing cells at first assume a moniliform character and later on grow into long delicate filamentous threads and form a mycelium. Neither the cells nor the filaments are acid-fast organisms. In liquid glucose, maltose and saccharose mediums it shows the production of acid and gas, while showing no changes in lactose, mannite and dulcite media. The litmus milk showing only acid but no clotting. In peptone water and nutrient broth mediums the growth forms a deposit at the bottom of the tubes, the medium fluid remaining clear. All these above characters conform to the morphologic and cultural characters of *monilia tropicalis* as described by Castellani.

Japan Medical World, Tokyo

Dec. 15, 1921, **1**, No. 8

Periodicity of Filaria Bancrofti. S. Suganuma.—p. 1.
*Experimental Studies of Metastasis of Mouse Carcinoma. S. Okonogi.—p. 4.
*Quantity of Combined Carbonic Acid in Cerebrospinal Fluid. E. Tokuoka and K. Ogasawara.—p. 6.
Nerve Endings in Heart Muscle of Man. K. Sato.—p. 10.

Anemia Favors Occurrence of Carcinoma Metastases.—Okonogi found experimentally that by frequent bleeding of mice who were the victims of carcinoma, metatasis, especially in the liver, kidney and lung, in the order named, was favored. Evidently a state of anemia favors the formation of metastases. Fifty-three of 100 mice that were bled had metastases, whereas only twenty-two of 100 mice not bled had metastases.

Carbonic Acid in Spinal Fluid.—The amount of carbonic acid combined in the spinal fluid as bicarbonate in 100 c.c. of spinal fluid of healthy women at 0 C. under the pressure of 760 mm. averages 63.0 volume per cent. This is about 20.0 volume per cent. according to Tokuoka and Ogasawara more than that in normal persons. The carbonic acid in 100 c.c. of venous blood of adult women averages 54.4 volume per cent. Starvation for from twenty-one to twenty-four hours and the administration of castor oil before operation causes a slight decrease of carbonic acid. The amount of carbonic acid in the venous blood is markedly decreased after starvation, from 3.9 to 1.75 volume per cent. The amount of carbonic acid in cancerous women averages 60.1 volume per cent. The acid in the blood of cancerous women averages 49.62 volume per cent.

Japan Naval Medical Association Bulletin, Tokyo

October, 1921, No. 34

Experiment on Lipovaccine of Shiga's Bacillus. R. Watanabe.—p. 1.
Experiment on Serum Lypase. M. Ueda.—p. 2.
*New Method for Staining Flagellated Bacteria and Spirochetes. H. Hidaka.—p. 2.

Staining Flagellae and Spirochetes.—Hidaka's method is as follows: Mordant—100 c.c. of a 10 per cent. solution of potassium acetate is heated to about 40 C.; add 100 c.c. of 3 per cent. solution of phenol containing 10 gm. of tannic acid; then add 20 c.c. of a 2 per cent. solution of tartar emetic. This mixture, solution A, is turbid white. It is kept in a brown bottle and is used as mordant. Solution for silvering: 3 per cent. solution of silver nitrate is added, drop by drop, with enough ammonia to clear the brown mixture; then with 3 per cent. solution of silver nitrate until the mixture begins to be turbid again. This mixture is solution B. Method of staining: (*a*) Cover the smear specimen with a solution A. (*b*) Heat in paraffin incubator for five minutes, the temperature being kept at 70 C. for spirochetes and typhoid bacillus, 80 C. for spirillum cholerae. (*c*) Cool the slide in the air and (*d*) wash thoroughly with tap water. (*e*) Solution B is placed on the slide, which is treated in the same manner as under (*b*) and (*c*). (*f*) Twenty per cent. solution of sodium hyposulphite is added and left for from ten to twenty seconds; the slide is then washed, dried and mounted with xylene balsam for examination. The slide treated under (*a*), (*b*), (*c*) and (*d*) can be stained with the usual anilin dyes.

Journal of Laryngology and Otology, Edinburgh

January, 1922, **37**, No. 1

Hemorrhage During and After Tonsillectomy; Surgical Principles and Methods for Its Control. C. G. Coakley.—p. 3.
Pathologic and Clinical Aspects of Deaf-Mutism. J. S. Fraser.—p. 13.
Case of Fatal Meningitis Following Submucous Resection of Nasal Septum. W. E. Powell.—p. 39.
Foreign Body in Right Bronchus. T. A. MacGibbon.—p. 40.
Facial Paralysis Associated with Acute Middle Ear Suppuration. E. Culpin.—p. 41.

Lancet, London

Dec. 31, 1921, **2**, No. 5131

Subtropical Esculents. M. C. Grabham.—p. 1357.
*Use of Levulose as a Test for Hepatic Inefficiency. J. C. Spence and P. C. Brett.—p. 1362.
*Tuberculin Treatment of Bronchial Asthma and Hay-Fever. W. S. Van Leeuwen and H. Varekamp.—p. 1366.
Standardization of Suspensions of Red Blood Cells for Wassermann Tests. J. W. Bigger.—p. 1369.
Serous Meningitis. A. G. Yates.—p. 1371.
*Case of Partial Pyloric Stenosis. R. P. Rowlands.—p. 1373.
Loss of Reflex to Light Restored in Sleep. A. Garvie.—p. 1374.

Levulose as Test of Hepatic Inefficiency.—Spence and Brett assert that a valuable indication of the efficiency of the liver can be obtained by estimating the changes in blood sugar concentration which follow the ingestion of levulose. In a healthy adult, with a normal liver efficiency, a dose of 50 gm. levulose will produce no appreciable rise in blood sugar. In a subject with diminished liver efficiency a definite rise in blood sugar will result from the ingestion of levulose. The height and length of the "blood-sugar curve" which portrays this rise will be in proportion to the degree of liver inefficiency which is present. The test affords a means of estimating the degree of liver damage in cases of toxic arsphenamin hepatitis and other diseases of the liver. The kidney threshold for levulose is lower than that for glucose and varies in different individuals. The inconstancy of the threshold for levulose renders the older method of testing liver efficiency by urinary examination inaccurate.

Tuberculin Treatment of Asthma and Hay-Fever.—Van Leeuwen and Varekamp have noted that very often persons who show a strong skin reaction after serum injections also give a very marked tuberculin (Pirquet) reaction. Of thirty-four cases of bronchial asthma, thirty gave a positive Pirquet test and four patients were negative. The four negative cases were not treated with tuberculin and will not be considered further in this paper. Only two cases of hay-fever were treated with tuberculin. The tuberculin used was Koch's T. O. A. All injections were given subcutaneously, beginning with low doses—mostly 1 c.c. of a 1:100,000 dilution—which gave no general reaction. During the treatment of these cases the decided impression received was that it was better to keep to very low doses: The most prominent factor of treatment is the disappearance of the acute attacks of asthma in a very short time. When the acute attacks of dyspnea disappeared after the first injections of tuberculin one of two conditions remained. Either the patient was completely cured or there was a chronic bronchitis left. Even in the latter case the improvement was marked. Most of the patients considered themselves to be cured and took the remaining bronchitis very lightly. Of twenty-eight patients treated eighteen are completely cured; in four, acute attacks of asthma completely or almost completely disappeared, but where a chronic bronchitis remained, five were improved by treatment and in one case the treatment failed to improve the patient's condition.

Partial Pyloric Stenosis.—Rowlands' case is a typical instance of partial stenosis due to spasm and hypertrophy of the pyloric sphincter. Finney's operation was done with excellent result. Five months after the operation the patient had not vomited and was entirely free from pain.

Medical Journal of Australia, Sydney

Dec. 10, 1921, **2**, No. 24

Listerian Oration. F. D. Bird.—p. 527.
*Clinical Manifestations of Reserve of Heart Muscle. N. W. Markwell. —p. 534.
*Convention and Decapsulation in Acute Nephritis. J. F. Mackenzie.—p. 535.
Treatment of Urethritis. R. J. Silverton.—p. 536.
Rupture of Bowel by Compressed Air. W. A. Halles.—p. 538.
*Extreme Ascites. I. C. Hains.—p. 539.

Reserve of Heart Muscle.—Markwell asserts that an initial intrinsic period of ventricular systole exists and can be recognized. This initial intrinsic period is the measure of the reserve of the heart muscle. Its duration can be determined by the trained ear and it can be demonstrated in the cardiogram. Shortening of the initial intrinsic period is a necessary accompaniment of a lessening of the reserve. At the commencement of such a condition there are, typically, no heart symptoms. The mechanism of the heart action is discussed.

Decapsulation in Acute Nephritis.—Mackenzie urges early decapsulation of the kidney instead of waiting until it is too late. Not only cases of acute nephritis but that type of pyelitis or pyelonephritis with bacilluria, very obstinate to treat by ordinary means is considered an indication for the operation.

Extreme Ascites.—Hains removed *27* quarts of fluid by paracentesis from a patient who had heart disease.

Medical Journal of South Africa, Johannesburg

November, 1921, **17**, No. 4

Toxic Idiopathies or Idiopathic Toxemias. E. G. Drury.—p. 66.
Human Anthrax and Arsphenamin. A. Pijper.—p. 74.

Practitioner, London

January, 1922, **108**, No. 643

Etiology, Prevention and Treatment of Phthisis. R. D. Powell.—p. 1.
Prevention of Venereal Diseases. A. Reid.—p. 19.
Id. E. B. Turner.—p. 30.
Arteriosclerosis. G. Evans.—p. 38.
Recent Work on Diseases of Heart. C. W. Chapman.—p. 45.
Educating the Patient. L. Grant.—p. 58.
Pneumonia and Its Treatment. A. E. Rouse.—p. 67.
Cesarean Section Necessitated by Adhesion after Gastroenterostomy. D. D'Esterre.—p. 69.

Annales de Médecine, Paris

October, 1921, **10**, No. 4

*Syringomyelia plus Spinal Cord Tumors. G. Bickel.—p. 253.
*Spinal Fluid in General Paresis. R. Targowla.—p. 275.
*Metastasis in Bones. J. Catsaras.—p. 295.
*The Oculocardiac Reflex. J. A. Barré and L. Crusem.—p. 303.
Fundamental Principles of Auscultation. F. Rist.—p. 317.
Mesocephalic Syndrome with Objective Sensory Disturbances. Faure-Beaulieu and H. Bouttier.—p. 333.

Tumors of Spinal Cord.—Bickel describes with photomicrograms the case of a woman of 23 who slowly developed, after a blow on the neck, a syringomyelic gliomatosis, and with

this was found, an ependymal spongioblastoma in the cervical spinal cord, and a glio-ganglioneuroma in the region of the fourth ventricle. The combination of these three types of tumors with a defect in development of the spinal cord, in this case, suggests an embryonal origin for primary tumors of the central nervous system and for syringomyelia. A bibliography of 136 titles is appended.

The Spinal Fluid in Progressing General Paresis.—Targowla's conclusions from the findings with the various tests for the spinal fluid applied in over twenty-one cases of general paresis are that not one of the reactions is specific but, taken together, they testify to the diagnosis and to the intensity of the disease process. The colloidal benzoin test seems to be especially instructive in indicating the intensity of the meningo-encephalitis. In fifty cases in which it was studied, the intensity of the reaction varied with the remissions of the disease and corresponded to the clinical course.

Metastatic Cancers in Bones.—Catsaras has been able to find only one case on record in which there was metastasis in several bones from a cancer in the liver. He here describes a second case; the primary adenocarcinoma in the liver with cirrhosis had entailed metastasis in the head and neck of the right femur. The cells of the tumor in the femur showed the same arrangement as in the liver, and abundant production of bile, the tumor tissue being deep green in color.

The Oculocardiac Reflex.—Barré and Crusem abbreviate this to "roc." They report extensive research with it in normal persons with a spring eyeball compressor with which the pressure can be graduated and recorded. The pulse may be slowed by it up to 30 or 40 beats in apparently entirely normal conditions. They attach no significance from the diagnostic point of view to the inversion of the roc. They explain the oculocardiac reflex as a sympathetic-vagus phenomenon, the trigeminal not involved.

Archives de Médecine des Enfants, Paris

December, 1921, **24**, No. 12

*Syphilitic Pseudoparalysis. H. Barbier.—p. 713.
Chronic Rheumatism in Children. P. Nobécourt and L. Nadal.—p. 731.
The Weight of a Dinner. J. Camescasse.—p. 747.
*Orchitis During Diphtheria. G. Blechmann and J. Stiassnie.—p. 749.
Tuberculosis in Infants in New York. J. Comby.—p. 753.

Atrophy from Inherited Syphilis.—Barbier discusses the treatment for inherited syphilis responsible for arrest of development of the bones plus more or less cachexia. He warns that specific treatment for the *atrophic hérédo-syphilitique* should not be begun until digestive disturbances have been corrected. Conditions in 22 of 40 cases improved so materially under treatment that the children left the hospital in good condition, including 3 with Parrot's disease; 9 were much improved, including 1 with Parrot's disease; 7 died, as also 2 others with Parrot's disease. In the total 6 cases of Parrot's disease, the bones were abnormally transparent and there were subperiosteal deposits on all the bones. The femur had fractured in 2 of the infants; none was over 2 or 3 months old. When the manifestations of the inherited syphilis are in skin or bones, they respond to treatment better than when the viscera are involved. Secondary infections of the skin interfere with specific treatment, and it may be well to suspend it until these are cured. Each infant has to be studied separately as the resisting powers vary so widely, and with atrophy the weight is no guide. He begins with very small doses by subcutaneous injection and repeats every fifth day. Mercurial treatment first, and then an arsenical, seems to give the best results. He thinks the treatment should be repeated from time to time, like the courses of treatment in acquired syphilis, in order to maintain the benefit derived. He illustrates his statements with a number of the more typical cases described in minute detail.

Orchitis in Diphtheria.—The boy of nearly 7 developed bilateral orchitis and epididymitis in the course of very severe diphtheria, requiring intensive antitoxin treatment. Blechmann is inclined to ascribe these genital complications to the antiserum, as they appeared and disappeared with other symptoms of serum sickness.

Bulletin de l'Académie de Médecine, Paris

Nov. 15, 1921, **86**, No. 37

*Congenital Dislocation of Shoulder. P. Coudray.—p. 262.
*Effects of Artificial Pneumothorax. Armand-Delille et al.—p. 266.
*Edema in Hemoclasic States. J. Le Calvé.—p. 265.
Flies and Cholera Infantum in Institutions." A. Lesage.—p. 267.

Congenital Dislocation of the Shoulder.—Coudray reports two cases of luxation of the shoulder from malformation or arrested development of the shoulder. The right arm in both was completely useless. He ordered massage and passive exercising of the arm, and in the child improvement was prompt and progressive. The head of the humerus was of normal shape, and the child soon could raise her hand to her head. The malformations in the young man were irreparable.

Antibodies in Serum Under Artificial Pneumothorax.—Under the induced pneumothorax, not only the fever and expectoration subside but the antibody count of the blood grows less, just as if the tuberculous process had been cut out entirely.

Edema in Hemoclasic Conditions.—The anaphylactic shock and the protein shock, as well as asthma, urticaria, migraine and hemoglobinuria all have the feature in common that the sympathetic vasomotor system is predominantly affected. This is manifested by an early and constant drop in the blood pressure, and vasodilatation. Le Calvé explains how this entails edema.

Nov. 29, 1921, **86**, No. 39

*The Criminal Insane. C. Vallon.—p. 298.
*Fixation of Poisons on Nerve Centers. J. Camus.—p. 302.
*Friedberger Test for Typhus. G. Delamare.—p. 305.
*Desquamation in Typhus. Id.—p. 306.
*Shock Treatment of Experimental Infection. F. Arloing, A. Dufourt and L. Langeron.—p. 307.
*Prophylaxis of Diphtheria. E. Sacquépée.—p. 309.

The Criminal Insane.—Vallon states that the French laws make no provision for the criminal insane. When the court accepts the plea of insanity as attenuating the responsibility for a crime, the accused is sent to an insane asylum. When in the judgment of the medical force of the asylum no further psychiatric treatment is needed, he is dismissed. He may thus escape both prison and internment.

Fixation and Neutralization of Poisons in the Nerve Centers.—Camus has been studying this subject for ten years, and reports findings in rabbits and dogs. The poisons that display an immediate toxic action are more numerous than those that act tardily. Lead is one of the latter; intraspinal injection of 2 or 4 mg. of lead chlorid causes no disturbances for two or three days, but then convulsions develop, speedily fatal. The same salt injected directly into one hemisphere causes a small focus of necrosis which becomes encysted and no appreciable symptoms follow. The same dose injected by the vein is borne without harm if the meninges are sound, but if a mild aseptic meningitis has been previously induced, the animal develops convulsions the same as if the chemical had been injected intraspinally. A small dose of choralose irritated the vomiting center while a little larger dose paralyzed it, although none of the other centers, respiration, heart, vasomotor, secretory, etc., were affected in the least. Syncope in the course of spinal anesthesia can be effectually combated with caffein if the amount of the anesthetic is below the lethal dose, but not otherwise. But when supplemented by long artificial respiration, the anesthetic may be eliminated, even when above the lethal dose, and resuscitation follows. His experiments with tetanus antitoxin injected intraspinally confirmed its curative power, but this seems to be because it prevents further fixation of the toxin on the nerve centers, rather than from any direct neutralization of the toxin.

The Friedberger Test in Typhus.—Delamare injected subcutaneously a small amount of a culture of *Proteus* X_{19}, heated for two hours, in five cases of typhus, fourteen of typhoid, and two of relapsing fever. Friedberger has asserted that no local reaction follows in typhus, but Delamare found the reaction equally pronounced in all his material with the single exception of one case of typhus. It thus has little differential value, but it suggests, he says, that the cyanosis, herpes and desquamation in typhus are due to secondary infection with the proteus. The desquamation in typhus is fine, resembling

the particles rubbed up on paper with a rubber eraser. It occurs usually between the tenth and sixteenth days, and may aid in the tardy or retrospective diagnosis of the typhus.

Shock Treatment of Experimental Infection.—Arloing and his co-workers relate that in research with 200 guinea-pigs an induced sero-anaphylactic shock protected the animals against otherwise fatal experimental infection with the pyocyaneus in 88 per cent., with typhoid bacilli in 15 per cent., and with the colon bacillus in 30 per cent. The controls all died. The *choc sérique* was induced six hours after the inoculation with the bacteria. Infection with the pneumococcus, tubercle and anthrax bacilli did not seem to be modified by the shock treatment, even repeated in series.

Prophylaxis of Diphtheria.—Sacquépée assumes that when the diphtheria bacillus is passed from one person to another it retains its shape, so that if the first person had long bacilli, the bacilli in the second will be long. Hence if the first cases in an epidemic show long or medium bacilli, the contacts presenting only short bacilli can be disregarded. This simplifies materially the search for carriers, and their treatment, and his experience has confirmed the reliance that can be placed on thus weeding out the potentially dangerous from the harmless contacts.

Bulletins de la Société Médicale des Hôpitaux, Paris

Nov. 11, 1921, **45,** No. 32

Otitis in Nurslings. L. Tixier.—p. 1449.
Streptococcus Septicemia After Rubeola. A. Florand and N. Fiessinger. —p. 1452.
Syphiloid Hyperchromia of the Neck. Gougerot.—p. 1453.
*Gastric Spasm in Infant. G. Variot.—p. 1454.
*Chronic Mechanical Jaundice. L. Tixier and E. Douay.—p. 1459.
Secondary Sclerosis of Pulmonary Artery. Ribierre and Giroux.—p. 1465.
*Recurring Pneumonia. A. Sacquépée.—p. 1476.
Epidemic Encephalitis in Cortex. Delater and Rouquier.—p. 1483.
*Mercury and Bismuth. G. Milian.—p. 1486.
Some Unusual Roentgenographic Findings in Digestive Tract. Ramond, Jacquelin and Borrien.—p. 1490.
Familial Erythema Nodosum and Miliary Erythema. Gendron.—p. 1495.

Gastric Spasm in an Infant.—In Variot's case, the apparently healthy, breast fed infant developed uncontrollable vomiting during the third week of life, and roentgenoscopy revealed an hour-glass spasm of the stomach. By the end of the second month the aspect was that of extreme athrepsia, but recovery gradually followed under persevering feeding with hypersweetened milk with one third water, preceded by a small spoonful of a solution of 5 parts sodium citrate in 300 parts distilled water, supplemented by a daily injection of sea water (*plasma marin*). In a preceding case of this *médiospasme gastrique prolongé*, the vomiting kept up for several months but the tendency was finally overcome by the same measure, extra-sweet milk. Only the roentgen rays can distinguish between this bilocular spasm and congenital hypertrophy of the pylorus, but operative measures such as the latter requires would probably be futile with the former. Extra-sweet milk, he says, seems to combat the tendency to vomiting in infants, whatever its cause. The stomach in both his cases was left abnormally wide and the pylorus region shaped like a cylinder; this suggests that some congenital anomaly may be responsible for the spasm. This anomaly, unlike the congenital hypertrophy, may become attenuated in time and outgrown.

Chronic Mechanical Jaundice.—A hydatid cyst in the liver was responsible for the jaundice in the boy of 15 as it compressed the common bile duct.

Relapsing Pneumonia.—In the first attack there were two separate foci, and each was due to a different type of pneumococcus. Only one was affected by the serotherapy used. At the second attack, a vaccine made from each of the two types of pneumococci proved promptly effectual, notwithstanding that the patient had been contending with purulent pleurisy in the interim. The whole siege lasted for over two months.

Mercury Plus Bismuth.—Milian remarks that now that mercury seems to be resuming its ancient vogue, we may have to contend with more or less intolerance of mercury by the mouth. He has found that mixing 0.75 gm. of bismuth subnitrate with 0.01 gm. of calomel (for one of 60 powders) is an excellent means for warding off signs of intolerance in treating syphilis. The bismuth seems to prevent diarrhea, anorexia, stomach disturbances and even stomatitis, when mercury is being taken by the mouth. It seems advisable to give mercury in this way even if only to supplement it by other routes. The bismuth has to be kept up as long as the mercury is being given. He adds that it has quite a spirocheticidal action of its own.

Journal de Chirurgie, Paris

December, 1921, **18,** No. 6

*Tearing Loose of the Mesentery. L. Sencert and G. Ferry.—p. 561.
*Traumatic Epilepsy. C. Lenormant.—p. 577.

Tearing Loose of the Mesentery.—Sencert and Ferry report two cases of abdominal contusion in a child of 9 and man of 45 in which the laparotomy revealed that the only essential injury was that the mesentery had been torn loose, close to the intestine, over a stretch of 20 and 30 cm. In the child the intestine had been torn along with its mesentery; in both the segment of bowel was resected. In 32 such cases on record, the internal hemorrhage was severe in 20, proving fatal in 5 of them in which no operation was attempted, and in 4 operative cases. In others the hemorrhage was very slight; in 3 cases the hemorrhage did not occur until after a considerable interval. The trauma in these cases was usually from being run over, or crushed between two wagons, or a beam rolling on the abdomen. The contusion was violent, but the violence was applied slowly and progressively and at a tangent to the walls of the abdomen. In 10 of the cases analyzed the men kept on with their work for several hours, complaining merely of a dull pain deep in the abdomen, with no signs of hemorrhage or perforation of a viscus. Not until after thirty-six or forty hours, or even seven or eight days in 2 cases, symptoms of diffuse peritonitis developed. The loop deprived of its mesentery had become gangrenous. In one of the 2 cases personally observed there was a very sharp pain at a certain spot on the lightest palpation, and immediate contraction of the muscles above. The spot was not spontaneously painful. This phenomenon should suggest the possibility of the mesentery being torn loose. If the mesentery is merely torn longitudinally, at a distance of over 2 cm. from the bowel, and the laceration is not over 9 cm. long, it might be sutured, and the loop left unmolested. But it is safer to resect it at once, and under other conditions there should be no hesitancy in resecting it. A tear in the mesentery that escapes detection might cause acute occlusion later by a loop slipping into it.

Operative Treatment of Traumatic Epilepsy.—Lenormant's verdict after analyzing the literature on this subject and fifty-one recent cases is that operative treatment is not fraught with special danger while it is often effectual, but it rarely cures completely, and exceptionally it may aggravate conditions. It is justified in cases rebellious to medical measures.

Lyon Médical

Aug. 25, 1921, **130,** No. 16

Radium Treatment of Uterine Cancer. R. Condamin.—p. 719. Conc'n in No. 17, p. 763.

Sept. 25, 1921, **130,** No. 18

Treatment of Pleural Fistulas. M. Durand and L. Michon.—p. 807.
Appendicitis and Hematuria. A. Giulani.—p. 813.

Oct. 10, 1921, **130,** No. 19

*Coryza in Young Infants. P. Chatin.—p. 850.

Intra-Ocular Treatment of Coryza in Young Infants.—Chatin insists on the necessity for thorough treatment of coryza in young infants. The interference with suckling and with respiration is negligible in comparison to the danger from such an infectious focus for the ears and lungs, and as a source of infection for others. He has found very useful the instillation in the eyes, two or three times a day, of a 10 per cent. collyrium of argyrol, to act on the nose through the lacrimal passages. The physician must introduce the collyrium himself at first. The mother soon appreciates the benefit from this treatment, and is then willing to continue it herself. He reiterates that it is absolutely harmless and an almost certain cure for coryza in young infants. He has been using it for ten years.

V. 192

Médecine, Paris

November, 1921, **3**, No. 2

*Syphilography and Dermatology in 1921. H. Gougerot.—p. 85.
Mikulicz' Disease and Syphilis. Jeanselme.—p. 100.
*Means to Ward Off Arsphenamin Shock. J. A. Sicard.—p. 102.
*Nature of Nitritoid Crisis. M. Pomaret.—p. 107.
Nitritoid Crises Under Arsenicals. Lévy-Bing and Gerbay.—p. 111.
Technic for Intramuscular Injections. Spillmann and Watrin.—p. 112.
Intramuscular Injections of Arsphenamin. Bloch and Pomaret.—p. 114.
Dementia Praecox and Syphilis. L. Babonneix.—p. 118.
Treatment of New-Born with Syphilis. M. Pinard.—p. 120.
*Tertiary Syphilitic Fever. M. Chiray and A. Coury.—p. 123.
*Traumatic Syphilis. C. Simon.—p. 125.
*Arsphenamins and Blood-Producing Organs. A. Lévy-Franckel.—p. 129.
*Sterilization of Linen for Infants. E. Weill.—p. 131.
Disfiguring Seborrhea, Pigmentation and Warts. Sabouraud.—p. 136.
Acute Phthiriasis. G. Milian.—p. 138.
Cerium Salts in Treatment of Tuberculids. H. Grenet et al.—p. 142.
General Treatment in Eczema. A. Louste.—p. 147.
*Treatment of Leukoplakia. Vignat.—p. 150.
*Gonorrheal Rheumatism. L. Ramond.—p. 154.
Inguinal Lymphogranuloma. L. Bory.—p. 156.

Syphilography and Dermatology in 1921.—Gougerot comments on the lively discussion still going on as to the comparative merits of large intravenous or small intramuscular or subcutaneous doses of the arsphenamins. All agree on the danger of inadequate treatment. Almost all agree also on the necessity for mercury to consolidate the results obtained with the arsphenamins. The tartrobismuthate of potassium and sodium has been extolled in treatment of syphilis by Levaditi and Sazerac, but no conclusive evidence has been offered as yet, and there is some risk that this drug may induce fever and albuminuria and a stomatitis like that of mercury. Several have reported good results by associating protein therapy with arsphenamin. Some state that the phenomena of the secondary stage disappeared as promptly under parenteral injections of peptone as under arsphenamin treatment. Schreiner advises an intravenous injection of peptone four hours after the injection of arsphenamin. "Is a rebellious Wassermann reaction due to the habit of secreting antibodies or is it a sign of still persisting infection?" He inclines to the latter view, himself. To ward off toxic action from the arsenicals, sodium hyposulphite is advocated by some; alkalines, etc., by others. In dermatology, a number of important works are cited, especially Brocq's study of dermatoses in the emotionally unstable under the influence of toxic action, and the numerous works on antianaphylaxis, specific or peptone; on urticaria from fatigue, from rapid eating without mastication, and on the necessity for individualizing treatment for cancer: "The basal cell epithelioma calls for radiotherapy; the prickle cell epithelioma for jgnicauterization; the melanic epithelioma for electrolysis." Autohemotherapy is still on trial; in one case it induced a threatening shock. The foreign body sarcoids that develop from injection of oil, seem to be usually tuberculous or develop on a tuberculous soil. In Gougerot's case a guinea-pig developed tuberculosis after inoculation from the lump. He remarks that France was the pioneer in antivenereal prophylaxis, but lags far behind other countries in its practical application. Tunis and Morocco have adopted his program and will soon be ahead of Paris. He adds that he will send a copy of his program to any physician or hygienist applying for it. Adress Dr. Sicard de Plauzoles, 6 rue Logelbach, Paris.

Antishock Measures.—Sicard's success in warding off toxic action from the arsenicals has been repeatedly mentioned in these columns. Any means to prevent upset in the colloidal balance of the blood serum will ward off the shock, he reiterates, and may cure it if under way. An intravenous injection of 1 gm. of sodium carbonate in 40 c.c. of distilled water will usually prevent any colloidoclasic shock when the arsphenamin preparation is injected afterward. Another way to prevent it is to inject a small amount of the arsenical into the arm below a constricting band. After waiting four or five minutes the constricting band is removed very slowly. Then the rest of the arsenical is injected. This form of skeptophylaxis has proved simple and effectual both for arsphenamin and horse serum shock. A third measure is subcutaneous injection of epinephrin plus pituitary extract. This is effectual also in treating established arsphenamin shock. In migraine, if the dose of peptone before the meal is not effectual or loses its efficacy, he orders 12 drops of 1:1,000 epinephrin to be taken before rising and 1 gm. of potassium bromid on retiring. If this fails, the sodium carbonate by the vein is almost certain to succeed. In hay-fever he has found effectual a powder made by grinding in a mortar various grains and grasses and having this fine powder inhaled like snuff.

Nature of Nitritoid Crisis.—Pomaret's research has apparently demonstrated that the toxic action known as the nitritoid crisis is not the work of the arsenic.

Syphilitic Fever.—Chiray and Coury expatiate on the blunders made in diagnosis and treatment in cases of syphilitic fever, especially in the tertiary stage, when there are symptoms from liver or peritoneum.

Traumatic Syphilis.—Trauma may rouse acquired or inherited syphilis, and determine the location of syphilitic lesions. The war brought a number of such cases into prominence and showed that only specific treatment could be counted on for a cure.

Action of Arsphenamin on Blood-Forming Organs.—Lévy-Franckel remarks that although arsphenamin has usually a favorable action on hematopoiesis, yet occasionally it seems to be responsible for grave splenomegaly with anemia. Any tendency of this kind calls for immediate suspension of the arsenical treatment.

Sterilizing Infants' Linen.—Weill insists that ordinary laundering is not enough. The diapers, caps, etc., should be steam sterilized, in institutions at least. Where this is the rule, skin affections in infants have become far less frequent; in his own service, they have dropped from 6 per cent. to 1 per cent.

Treatment of Leukoplakia.—Vignat extols the efficacy of superheated air and carbon dioxid snow for destruction of leukoplakia, and describes devices for their application in the mouth.

Gonorrheal Arthritis.—Ramond refers to the pseudophlegmonous form of gonorrheal arthritis, and extols the fine results he has realized with subcutaneous antimeningococcus serotherapy and an antigonococcus vaccine, alone or associated. Any one can apply this treatment and it may ward off otherwise inevitable ankylosis of the joint.

Presse Médicale, Paris

Dec. 14, 1921, **29**, No. 100

*Organotherapy in Liver Disease. J. Oddo and P. Borie.—p. 989.
Paralysis of Associated Movements of Eyes. F. Terrien.—p. 990.

Organotherapy in Liver Disease.—Oddo and Borie report the details of nine cases of liver disease, cirrhosis, jaundice during arsphenamin treatment, secondary syphilitic jaundice or catarrhal jaundice, all given treatment by 2 gm. of pulverized liver tissue daily. The digestion hemoclasis test was positive in all, that is, the constant drop in the number of leukocytes after ingestion, fasting, of a glass of milk. After six or seven days of this organotherapy, the hemoclasis test became negative, but on suspension of the liver treatment the reaction became positive anew, and could be banished again by resumption of the organotherapy. They remark that this is not only theoretically interesting but suggests the advantage of giving liver temporarily to remedy a transient insufficiency of the liver after general anesthesia or during arsenical treatment of syphilis. They advise beginning it a few days beforehand, and continuing it a few days afterward. In their experiments, the hemoclasic crisis never failed to disappear under the influence of the liver treatment in the moderate dose of 2 gm. a day, regardless of the severity of the liver disease.

Dec. 17, 1921, **29**, No. 101

*Pneumogastric Origin of Asthma. C. Lian.—p. 997.
*Otitis in Young Infants. Robert-Leroux.—p. 999.
"Extinction" Skin Sign in Scarlet Fever. P. L. Marie.—p. 1001.

Asthma; Nature and Treatment.—Lian presents evidence to the effect that asthma is a manifestation of overexcitability of the pneumogastric system, and that belladonna is the true

treatment for it. Epinephrin has merely symptomatic action; belladonna acts on the cause, and in adequate doses wards off the asthma as effectually as digitalis acts on asystolia. He says that the oculocardiac reflex is an excellent means for estimating the tonus of the pneumogastric, its exaggeration indicating hyperexcitability. He found it much exaggerated in 24 of 31 asthmatics tested, and moderately exaggerated in 5 others, only one giving a negative response. He gives the belladonna extract in 1 cg. pills, three times a day, one before dinner, the others on retiring and in the course of the night. The majority of the patients had no more attacks after the first, second or third night. It improves breathing conditions and promotes sleep, but it does not relieve the cough; this may require something additional. In 2 of his cases the persistence of the asthma under the belladonna convinced him that insufficiency of the kidneys must be responsible, and the nocturnal attacks of dyspnea subsided under a purge, venesection and theobromin with restriction to water.

Otitis in Young Infants.—Leroux deplores that so few think of examining the ears when an infant is sick, unless pus appears in the meatus. He insists that latent otitis is the rule in every new-born infant; the ear may be infected from the very first inhalation. Prophylactic measures should be applied to the ears as regularly as to the eyes of every new-born child. The nasal passages should be disinfected at once after birth and during the succeeding days, and the ears should be supervised in every case, and especially when symptoms develop for which the cause is obscure. After birth, the nostrils should be cleansed. He advocates inducing sneezing by insufflating a harmless powder composed of two thirds of boric acid, or the nose can be cleared out by aspiration with a rubber bulb. Then 2 or 3 drops of a 10 per cent. solution of argyrol in glycerin can be instilled in each nostril, for harmless disinfection. For the ear, he prefers a 1:20 solution of phenol in glycerin. The position given to the child's head must not be such as would favor penetration of mucus and milk into the cavum. On the slightest suspicion of mischief, paracentesis should be done; this never does harm, while the lack of it may prove fatal, he declares.

Revue Médicale de la Suisse Romande, Geneva

October, 1921, **41**, No. 10

Erythema Nodosum. E. Cueissaz.—p. 605. Cont'd.
Tuberculous Cirrhosis of the Heart. H. Curchod.—p. 648.
Individual Prophylaxis of Venereal Disease. R. Chable.—p. 662.
Butter-Flour Mixture in Infant Feeding. L. Exchaquet.—p. 671.
Tumor in Rhinopharynx of Infant. F. Payot.—p. 674.
Radium Treatment of Lymphosarcoma in Tonsil. C. Perrier.—p. 675.

Riforma Medica, Naples

Oct. 22, 1921, **37**, No. 43

Tributes to Cardarelli and Maragliano.—p. 1009.
*Exclusion of Pylorus. G. Cavina.—p. 1021.
Action of Gland Extract. V. Susanna.—p. 1022.
Present Status of Addison's Disease. G. Molinari.—p. 1024.

Exclusion of the Pylorus.—Cavina tied a silver wire around the pylorus after posterior gastro-enterostomy in six dogs. When the animals were killed, from two to six months later, it was found that the wire had worked its way through the tissues until it was almost free in the lumen of the bowel. If it had been given a little longer time, the wire would have been free in the lumen of the bowel, and the pylorus would have been permeable again. In one case the wire had been covered with rubber. Silk passes through the tissues in the same way. There is no danger of perforation, as the tissues heal over the path left by the wire or silk ring. In another series of experiments, he cut out an oval segment in the pyloric region, the longest diameter across the pylorus, cutting down to but not through the mucosa. Then he sutured together the lips of the gap left, making the suture lengthwise. This reduced the lumen materially, even closing it completely over quite a stretch.

Nov. 12, 1921, **37**, No. 44-46

*Transactions of Italian Congresses.—p. 1069.

Transactions of Surgical, Orthopedic and Internal Medicine Congresses.—The surgeons' main topics were gastro-intestinal ptosis and tuberculosis of the kidney, and the addresses and discussions are reproduced in full. The orthopedists' topics were tuberculous spondylitis and deforming osteo-arthritis, but the main interest centered on experiences with the Albee bone implants. Several reported fracture of the implants, saying that this prolonged the immobilization to such an extent that the time element—which is the main advantage in the Albee method—was counterbalanced. Putti related his impressions from his recent visit to the United States. He said that he found considerable hesitancy and skepticism here in regard to the use of the knife in tuberculous spondylitis, and that many of Hibbs' patients had fistulas left. The internists' topics were tuberculosis, purulent pleurisy and epidemic encephalitis.

Brazil-Medico, Rio de Janeiro

Oct. 8, 1921, **2**, No. 13

Medical Impressions of Brazilian Davos. Alcindo Sodré.—p. 177.
*Transmissibility of Leprosy. Belmiro Valverde.—p. 179.
*Skull Tumor. P. Palermo.—p. 184.

Transmissibility of Leprosy.—Valverde presents arguments against the assumption that leprosy can be transmitted by mosquitoes, and adds that Bahia used to be one of the largest foci of leprosy in Brazil. The governor reported in 1763 that there were 4,000 lepers in his district, and no measures to stamp it out have been taken since, but the disease is extremely rare there now, although mosquitoes abound.

Skull Tumor.—Palermo removed a tumor, as large as a hen's egg, from the forehead of a young man six years after a blow at this point. The bone seemed to have become necrotic and this, with transudation from the dura mater, had caused the semisolid tumor which left a cavity in the bone on its removal. The patient returned a month later with a large recurrence of the tumor, and this time Palermo lined the cavity with scraps of cartilage taken from the patient. They healed in place,and there has been no further disturbance during the five months to date. The cavity seems to have filled up with solid bone.

Oct. 15, 1921, **2**, No. 14

Vitamins and Hormones in Deficiency Diseases. G. Riedel.—p. 193.
*Myiasis of Mouth and Nose. A. da Matta.—p. 195.
The Tuberculosis Question. Amaury de Medeiros.—p. 197.

Nasobuccal Myiasis.—The man of 28 had been having severe pain in the head for two days and complained of deafness and vertigo, the mouth, nose and throat much inflamed. There was also mental confusion and vague hallucinations. The diagnosis at first had been "false heat stroke," but soon meningitis seemed to be responsible for the symptoms. No benefit was obtained from the various measures applied but the discovery of a maggot on the man's lip and of three openings in the palate cleared up the diagnosis, and under inhalation of chloroform and nasal douches the symptoms all promptly disappeared.

Oct. 22, 1921, **2**, No. 15

*Instrument to Open Tonsil Abscess. F. Castilho Marcondes.—p. 209.
*Mechanical Fluctuations in Leukocyte Count. A. L. Pimenta Bueno.—p. 211.
Protection of Children Against Tuberculosis. Moncorvo Filho.—p. 212.

Instrument to Open Abscess in Tonsil.—The instrument of which Castillo Marcondes gives an illustrated description combines the bistoury with forceps to stretch the opening. The cutting edge does not show until manipulated from the handle, and the abscess can thus be opened and evacuated quickly, and without alarming the patient, so that anesthesia is scarcely required.

Mechanical Leukocytosis and Leukopenia.—Pimenta Bueno comments on the variations in the number of leukocytes at various points in the vessels according as the blood is flowing more or less swiftly.

Oct. 29, 1921, **2**, No. 16

*Hookworm in Southern Brazil. W. G. Smillie.—p. 223.
*Endocrine Hemiplegia. Areobaldo Lellis.—p. 229.
Toxemic Meningitis in Child. L. Ferreira Lopes.—p. 231.
Rickettsia Rocha-Limae. Editorial.—p. 231.

Hookworm.—Smillie reviews the results of research on uncinariasis at the Hygiene Institute of S. Paulo, 1918 to 1920. He has the detailed records of 600 cases from twenty-

one different localities, and gives a number of charts such as he has previously published, with Darling, in the monographs of the Rockefeller Institute. Children under 10 and persons over 50 have comparatively few of these parasites, not enough to repay them for taking the treatment. All the fatalities from the use of chenopodium were in children under 9, and these children had had so few of the hookworms and so little disturbance from them that he regretted having given the treatment.

Endocrine Hemiplegia.—Lellis reports two cases of lax paralysis in adults, developing suddenly with loss of the heat, pain and tactile sensibility and, in one, of reflex action. There was nothing otherwise to indicate cerebral hemorrhage, and he administered parathyroid treatment. Improvement was pronounced in one or two days and continued to almost complete recovery, only a slight heaviness in the limbs on that side in the male patient. He changed then to ovarian treatment for the young woman, and complete recovery followed at once. She was of an infantile type, with various signs of endocrine insufficiency, and had never menstruated. He theorizes to explain the action in this case.

Semana Médica, Buenos Aires

Aug. 18, 1921, **28,** No. 33

*Anastomosis Between Cystic Duct and Stomach. F. Mastrosimone (Naples).—p. 193.
Address at Centennial of University. Ubaldo Fernández.—p. 201.
Indications for Cesarean Section. T. A. Chamorro.—p. 206.
*Purpura in Pneumococcus Infection. Florencio Bazán.—p. 209.
Postinfluenzal Laryngeal Abscess. J. Basavilbaso and J. Leyro Diaz.—p. 213.
Treatment of Preputial Athrepsia. J. Nin Posadas.—p. 215.

Sept. 22, 1921, **28,** No. 38

Inaugural Lecture on Clinical Medicine. P. Escudero.—p. 373.
Centennial of University. A. Pestalardo.—p. 380.
Deep Roentgen Ray Treatment in Gynecology. C. Heuser.—p. 388.
Influenzal Croup. J. Basavilbaso.—p. 391.

Anastomosis Between Bile Ducts and Stomach.—Mastrosimone relates that in a series of 1,000 operations on the biliary apparatus, 4 were for anastomosis between the cystic duct and the stomach, and all were completely successful. There has been no disturbance during the three months, two, three and four years since the operation, and the 4 patients seem to be in the best of health. The list includes one woman of 50 whose restlessness and coughing tore out one of the stitches so that bile oozed for a short time. He describes the technic, with illustrations, and also that of the 3 cases of cholecystoduodenostomy, 2 of anastomosis between the common bile duct and the duodenum, 1 of transmesocolic cholecystojejunostomy and 1 of anastomosis between the cystic duct and the colon. The stump of the cystic duct can be invaginated in the stomach through a buttonhole in the prepyloric region. It is drawn into the stomach with a loop of fine catgut the ends of which are brought through the stomach wall and tied outside. The mouth of the duct projects inside the stomach for 1 cm. and it is sutured to the buttonhole with catgut inside and with silk outside. This invagination method, applied at a point high on the posterior aspect of the stomach, where there are few blood vessels, seems to work perfectly. The end-to-side or side-to-side methods are more laborious and there is more danger of leakage.

Purpura in Pneumococcus Infections.—Bazán adds 2 new cases to the 7 he has found on record in which purpura was a feature of pneumococcus septicemia in infants. He summarizes the total 9 cases, all fatal.

Archiv für Gynäkologie, Berlin

Oct. 24, 1921, **115,** No. 1

*Mechanism of Menstruation Cycle. L. Seitz.—p. 1.
*The Menstrual Cycle with Adnexitis. R. Schröder and Frieda Neuendorff-Vietk.—p. 15.
*Pregnancy with Heart Disease. P. Werner and R. Stiglhauer.—p. 41.
*Kidney Functioning During Pregnancy. P. Werner.—p. 63.
*Toxic Action of Placenta Lipoids. H. E. H. Schönfeld.—p. 80.
Osteophyte Production in the Pregnant. E. Dreyfuss.—p. 126.
*Ulceration in Vagina. R. Schröder and E. A. Kuhlmann.—p. 145.
Papilloma of Uterine Cervix. R. Meyer.—p. 167.
One or Two Weeks' Ovum. N. Temesváry (Budapest).—p. 184.
Embryology of Wolffian Body. R. Meyer.—p. 199.

The Menstrual Cycle in Relation to Myomas.—Seitz explains his conception of the menstrual process, and emphasizes that biologic research in this line may throw light on tumor production. Biologic chemical factors evidently determine whether the tumor is to be benign or malignant. A familial tendency to tumor production testifies to biologic influences, as also the influence of castration on a myoma in the uterus.

Menstruation with Adnexitis.—This communication reports research on the modification of the menstrual cycle by acute and chronic disease in the adnex and uterus, in a large number of women. The data presented emphasize anew the importance of curing the catarrhal affection of the cervix as the source of the recurring infection of the genital organs above. They show further that rinsing out the uterus is liable to spread the infection from the cervix to the regions above. They demonstrate also the exceptional recuperative powers possessed by the uterus and the ovaries, so that in a few weeks the menstrual cycle usually rights itself, and proceeds normally thereafter, even after the severest disturbances.

The Heart Disease-Pregnancy Question.—The tabulated details of 67 cases from Wertheim's clinic confirm the serious nature of the disturbances liable to occur when a woman with a mitral defect becomes pregnant; 2 of the women died, and a third required interruption of the pregnancy. In the 31 cases of mitral insufficiency, 22 viable children were born at term; 6 in the 12 mitral stenosis cases, and 8 in the 19 of mitral plus another valvular defect.

Kidney Functioning in the Pregnant.—Werner reports from Wertheim's clinic several years of tests applied to determine the various features of kidney functioning in healthy pregnant women and maternity cases, and in others with glycosuria, albuminuria, chronic nephritis or eclampsia. The severest interference with kidney functioning was found in the cases with the highest albuminuria, chronic nephritis and eclampsia. The elimination of salt was reduced to the minimum, and water was eliminated defectively, and the regularity and persistence of these disturbances were striking. Still more striking was the prompt and pronounced change for the better almost at once after delivery. With heart disease the elimination of salt and water was not quite so defective, but that of nitrogen was more so, and improvement after delivery was slower and less pronounced. The disturbance in kidney functioning with albuminuria, chronic nephritis and eclampsia was shown to be of the same nature in all, differing merely in degree, but persisting without the fluctuations which are noted under normal conditions. The kidneys seem to have lost their elasticity.

Toxic Placenta Lipoids.—Schönfeld regards lipoids from the placenta as the cause of eclampsia, and insists that the lipoid content of the blood is as important in estimating the gravity of the condition as the urea content in uremia. He urges further research to improve and simplify the determination of lipoids in the blood. Treatment of eclampsia should include purgation, venesection and possibly decapsulation of the kidney, plus sedative treatment. The aim is to get rid of the lipoids from the abnormal internal secretion of the placenta, which are toxic either in themselves or from lack of normal antagonist endocrine substances, or from lack of the normal neutralization by the liver.

Ulceration in the Vagina.—Ten different kinds of vaginal ulcers are described, as compiled or observed, with examples of each. The list includes one case of a varicose ulcer.

Archiv für klinische Chirurgie, Berlin

Nov. 17, 1921, **117,** No. 2

*Cardiospasm and Esophagus Cancer. H. Kümmell.—p. 193.
Radical Treatment of Chronic Pleural Empyema. Kirschner.—p. 205.
Influence on Mastication of Alcohol Anesthesia of Gasserian Ganglion. A. Bleichsteiner.—p. 232.
Emasculation with Cancer of Penis. S. Hadda.—p. 244.
Slitting the Sternum. J. Wechsler.—p. 261.
Diagnosis of Foreign Body Peritonitis. P. Pick.—p. 268.
Primary Tumors Which Seem to be Metastases. S. Erdheim.—p. 274.
*Mouse Tumors After Inoculation with Human Cancer. F. Krysser.—p. 318.
*Etiology of Acute Paralysis of Stomach. H. Nieden.—p. 338.
Surgical Nonvisceral Tuberculosis. Wirsinger.—p. 423.

Operative Treatment for Cardiospasm and Esophagus Cancer.—Kümmell regards as great progress the drawing up of the stomach into the chest to serve as an esophagus. He has applied this method in three cases, once for caustic stenosis and once for cancer. The stomach is stretched and drawn up back of the sternum until it can be joined to the stump of the esophagus in the neck. The esophagus below was left unmolested except in the cancer case. With this, the esophagus was drawn down entirely into the abdominal cavity and out through the incision. The stomach was then loosened up all around and the esophagus was then cut away entire. The stomach was then drawn up through the diaphragm and sutured to the esophagus stump in the neck. The whole can be done at one sitting; one surgeon might be making the incision in the neck while the other was operating below.

Inoculation of Mice with Human Cancer Tissues.—Twenty photomicrograms show the findings after inoculation of white mice with material from four human cancers. The resulting tumors that developed in about 2 per cent. of the mice Keysser regards as of malignant nature. They took about ten months to develop, but this period grew shorter with succeeding generations.

Acute Paralysis of the Stomach.—Nieden states that to date no one has succeeded in reproducing acute paralysis of the stomach in animals, although severing the vagus on both sides below the diaphragm is followed by stretching of the fundus part of the stomach and retarding of the evacuation, testifying to reduction of tonus. Comparison of these and other experimental findings with clinical experiences demonstrates that a nervous predisposition, especially a tendency to paralysis of the intramural nervous system of the stomach, is an indispensable factor. General anesthesia or other toxic influences, operations, trauma, mechanical overexertion, etc., are merely the occasional cause. The mortality in the latest series published keeps as high as ever, as is seen by his tabulation of the cases published since 1911, 50 per cent. of the 36 cases terminating fatally. In 46.2 per cent. of the fatal cases the acute paralysis of the stomach was a postoperative complication. He estimates that there are about 200 cases in all on record. He reviews 84 publications on the subject and his own extensive research on dogs, citing various typical examples. Braun has reported the case of a boy of 12 who developed acute dilatation of the stomach from reflex action as a retention catheter was applied. It slowly subsided after removal of the catheter. This occurred twice, with an interval of several months of normal stomach functioning. Legueu has reported a similar case in which catheterization of the ureter brought on the acute paralysis of the stomach. One important practical conclusion from all this research is the warning of the danger of morphin in postoperative stomach disturbances and in acute paralysis of the stomach. Morphin promotes secretion in the stomach in addition to its other action, and hence it adds to the load the stomach is already carrying. Drugs to stimulate the parasympathetic nervous system would be theoretically indicated if it were not for this same untoward by-effect of some of them, pilocarpin, cholin, etc., that they increase the load of fluids in the stomach. He ascribes the benefit from postural treatment in part to the fact that it relieves the traction on the vagus. The relief is often so prompt and so extreme that nothing but this direct relief of the nerve from traction could explain it.

Deutsche medizinische Wochenschrift, Berlin

Nov. 10, 1921, **47**, No. 45

Streptodermia; Erysipelas. P. G. Unna.—p. 1349.
Recent Intracutaneous Diagnostic Methods in Tuberculosis (Own Urine; Own Blood Serum). S. Schoenborn et al.—p. 1351.
Roentgenotherapy in Pulmonary Tuberculosis. Schröder.—p. 1352.
Clinical Immunity in Pulmonary Tuberculosis. Zimmermann.—p. 1354.
Present Status of Myoma Therapy. L. Blumreich.—p. 1355.
Technic of Wassermann Test of Spinal Fluid. Langer.—p. 1356.
Blood Picture in Measles plus Whooping Cough. E. Cohn.—p. 1357.
Precipitin Reaction in Darkfield Illumination for Forensic Purposes; Remarks on Sachs-Georgi Reaction. F. W. Oelze.—p. 1357.
Salt-Poor Diet and Salt-Free Days for Diabetics. Ziegelroth.—p. 1358.
Parenteral Casein Therapy. L. Isacson.—p. 1359.
*Diagnosis of Kidney and Ureter Stones. Béla v. Mezö.—p. 1359.
Technic of Total Larynx Extirpation. A. Réthi.—p. 1360.
Silver Arsphenamin Sodium plus Arsphenamin Sodium. Ueberhuber.—p. 1361.
A Practical Method of Securing Bacteria-Poor Cowpox Vaccine. H. A. Gins.—p. 1362.
A Case of Sporotrichosis. A. Geiger.—p. 1363.
Present Status of the Physiology of Sex Determination. T. Péterfi.—p. 1363. Conc'n.
Hints for Practitioners: Luxations and Sprains. Ledderhose.—p. 1365.

To Facilitate Detection of Kidney and Ureter Stones.—Mezö has been pleased with his success in rendering a calculus visible in dubious cases of kidney and ureter stones by injecting 2 or 3 c.c. of a 10 or 20 per cent. solution of collargol. The collargol clings to the surface of the calculus, and it thus becomes more opaque for the roentgen rays. In seven cases in which the symptoms suggested possible lithiasis, but the roentgen findings were negative, he succeeded by this means in obtaining instructive roentgenograms. These stones all proved to be urate stones; one was as large as a hen's egg, and after the collargol application cast a shadow as distinct as a hard oxalate stone. He repeated the injection on alternate days, to a total of three at most; the roentgen examination followed a day or two after the last injection. Any inflammation, even if there is no stone, is favorably influenced by the silver salt. He never injected more than 2 or 3 c.c. of the 20 per cent. solution; this small amount is harmless, he says.

Medizinische Klinik, Berlin

Nov. 6, 1921, **17**, No. 45

*Diagnosis and Treatment of Kidney Disease. G. Dorner.—p. 1347.
*Spinal Cord Tumors. E. Redlich.—p. 1351. Conc'n.
*Treatment of Pruritus and Furunculosis. E. Pulay.—p. 1353.
Retarded Delivery. Nacke.—p. 1356.
*Diathermy with Chronic Gonorrheal Prostatitis. O. Simmonds.—p. 1357.
Isolated Fracture of Greater Trochanter. G. Neugebauer.—p. 1358.
*The Urine Reaction in the Tuberculous. A. Orlianski.—p. 1359.
Pre-Edema. E. Maliwa.—p. 1361.
Directions for Common Mixtures for Infant Feeding. K. Blühdorn.—p. 1364.

Diagnosis and Treatment of Kidney Disease.—Dorner writes from the Leipzig medical clinic of which Strümpel is director to emphasize the necessity for strict individual treatment of kidney disease as what is indicated in one form is directly injurious in another. Focal nephritis usually heals without requiring special treatment as a rule. With sclerosis of the kidney, the main thing is to sustain the heart: tonics, restriction of fluids, diuretics and sedatives. In acute nephritis, bed rest is imperative; the cases in which the patient keeps up during the early stage have a much graver prognosis. The intake of salt and of water must be as small as possible, and nitrogenous foods debarred. As the lungs evaporate an average of 500 gm. of water and an equal amount passes off through the skin, up to a liter of water can be allowed, fractioned, without harm to the kidneys or vascular system. As soon as the kidneys are secreting better, 200 gm. of sugar, with bread and unsalted butter can be given. As long as the tendency to edema persists, the salt should be kept below 2 or 3 gm. a day. This can be done with what he calls a sugar diet, namely ¾ liter milk, ¾ liter porridge of rice, oatmeal or other cereal, unsalted butter, and cooked fruit, varying within this range as possible. After the edema has subsided and a little salt is allowed, the urine must be examined daily for albumin. With threatening uremia, the protein intake should not be over 30 gm.; this amount is needed to maintain the protein metabolism and any surplus beyond this is liable to form the dangerous waste products. Sugar and carbohydrates can take the place of protein for the time being, as these do not form the dangerous waste products. With pure nephrosis, that is, degeneration processes without inflammation, nitrogen is eliminated fairly well by the kidneys, and hence there is no uremia, and no necessity for restricting the protein intake. No more should be given, however, than can be utilized; this can be determined by estimating the nitrogen output in the urine. With edema he has frequently found what he calls the *Wasserstoss* effectual, that is, drinking 1.5 liters of tea within thirty minutes. The resulting freshet may clear out the kidney vessels and restore urine secretion to practically normal. If this does not succeed the first time, it can be repeated a few days later. With edema of long standing, attempts can be made to mobilize the fluid

with baths at 104 F., cautious sweating procedures and purges. Laxative teas are useful. Great caution is necessary with theobromin and similar drugs as they may irritate the kidneys and induce hematuria. Urea has proved a good diuretic; it can be given dissolved in lemonade up to 60 gm. a day. In one case of severe and rebellious nephrosis he succeeded with this in getting nearly all the water cast off. This is applicable of course only in cases with good excretion of nitrogen. No benefit was apparent in his trials of hypertonic solutions, seeking to influence the kidneys by modifying osmosis.

Spinal Cord Tumors.—Summarized, Jan. 28, 1922, p. 317.

Treatment of Pruritus and Furunculosis.—Pulay's research on the blood has confirmed that pruritus can be classed in five great groups: The group in which general pruritus is a symptom of a vegetative neurosis, with predominance of the vagotonic element, is easily and promptly curable with atropin. He gives three times a day from 8 to 10 drops of a solution of 0.01 gm. atropin sulphate in 15 gm. distilled water. This is taken the first two or three days of each week, and kept up for weeks, as this treatment is only symptomatic. The second group includes all cases with abnormal uric acid metabolism, and treatment is that for the uric acid diathesis and gout in general. He includes the leukemia and lymphogranulomatosis cases in this group, as the blood contained an abnormal amount of uric acid in his cases. The third group is that of diabetes. The pruritus in six cases was the first and only symptom from the abnormally high sugar content of the blood. Internal salicylic medication proved successful in this form of pruritus. The fourth group is the chronic uremia cases. Two patients with pruritus of long standing seemed to be otherwise entirely healthy, but analysis of the blood showed high content in nonprotein nitrogen, uric acid and cholesterin, and provocative tests of kidney functioning revealed tube casts. Venesection with diet as for nephritis, and diuretics, promptly cured the pruritus. Pruritus may thus give the clue to unsuspected nephritis. Abnormally high uric acid, cholesterin and sugar content of the blood may likewise induce pruritus, with high blood pressure but apparently normal urine secretion. He describes three cases of this kind, classifying them apart as his fifth group. In one in this group the blood showed a high calcium content.

Furunculosis.—Pulay's experience has been that pruritus precedes furunculosis; the scratching opens the portal for the infectious process. Before a cataplasm is applied, the surrounding sound tissue should be protected with plaster or a salve dressing, applying the cataplasm outside of this. All irritation of the skin in furunculosis should be scrupulously avoided; even heliotherapy is contraindicated. He protests against merely incising a furuncle to release pus unless compelled by high fever and changes in the pulse. The incision does not remove the cause and merely opens up new routes for infection. Protein therapy and vaccine therapy often give excellent results during the primary septic process in furunculosis. It is so little specific that the autogenous form of vaccine therapy is scarcely called for, and baths in any form are contraindicated with an existing furuncle. Treatment should include isolation of the furuncle and removal of its core, and general treatment according to the type of pruritus. It is not a surgical affection, he reiterates; it requires conservative measures, and we cannot warn too often against a hasty incision.

Diathermy in Treatment of Chronic Gonorrheal Prostatitis.—Simmonds reports eleven cases which all sustain his statements in 1912 that diathermy is capable of curing chronic gonorrheal prostatitis. His experience since has convinced him that it deserves the preference over all other measures.

The Auto-Urine Reaction in the Tuberculous.—Orliansky's verdict is against the reliability of the Wildbolz own urine test.

Münchener medizinische Wochenschrift, Munich

Nov. 4, 1921, **68**, No. 44

Muscular Involvement in Rachitis. A. Müller.—p. 1409.
Method of Choice in Exclusion of Pylorus. F. J. Kaiser.—p. 1413.
Postural After-Treatment in Laparotomy. Goetze.—p. 1414.
*Effect of Roentgen Rays on Blood Coagulation. R. Feissly.—p. 1418.
Type of Syphilis Resistant to Arsphenamin. Siemens.—p. 1419.
Behavior of Lipoids in Flocculation Tests. P. Niederhoff.—p. 1419.
Determination of the Apex Beat. K. Grassmann.—p. 1420.
Reflexes of the Abdominal Walls. L. Stern-Piper.—p. 1421.
Benefit from Roentgen Irradiation in Generalized Psoriasis. Görl and Voigt.—p. 1423.
Foreign Body Diverticulitis (Meckel's). A. Henrichsen.—p. 1423.
Movement of Population in German Empire, 1851-1920. Burgdörfer.—p. 1425.
The Etiology of Acne Vulgaris. F. Seibold.—p. 1427.
Instrument to Aid in Intravenous Injections. Friedlich.—p. 1427.
Pneumatic Pessaries. Durlacher.—p. 1427.
Nature and Origin of Diastatic Ferments. Biedermann.—p. 1428.
The Painless Birth Question. Grassl.—p. 1428.
Present Status of Treatment of Goiter. A. Krecke.—p. 1429.

Accelerating Effect of Roentgen Rays on Blood Coagulation.—Feissly reports that from his experiments with citrated blood and on the exposed jugular vein of the horse it is evident that roentgen irradiation causes a more rapid coagulation of the blood. This result will serve to explain the accelerated coagulation following irradiation of the spleen, the liver and the lungs. It is based, in his opinion, on the destruction of leukocytes and blood platelets, or possibly on the release of a blood-clotting cytozym. The therapeutic irradiation of the spleen, in case of hemorrhage, might possibly be referred to as a form of autocytozym therapy.

Zeitschrift für klinische Medizin, Berlin

Nov. 15, 1921, **92**, No. 1-3

*Catalase Index of Erythrocytes. R. Nissen.—p. 1.
*Paroxysmal Hemoglobinuria. J. Burmeister.—p. 19.
*Carbon Monoxid Poisoning. H. Günther.—p. 41.
*Spirochetes in Stomach Content. A. Luger and H. Neuburger.—p. 54.
*Duration of Fatal Diabetes. K. A. Heiberg.—p. 76.
Intestinal Findings in Dysentery. A. Lewin.—p. 78.
War Enteritis. E. Otvös.—p. 94.
*Mercuric Chlorid Nephrosis. H. Gorke and G. Töppich.—p. 113.
*Hypertonia and Sugar Content of the Blood. F. Härle.—p. 124.
*Treatment of Hemoglobinuria from Chilling. J. Burmeister.—p. 134.
*Septic Jaundice. K. Bingold.—p. 140.
Lipolytic Ferment in Lymphocytes. A. Resch.—p. 160.
Morbus Maculosus Werlhofii. A. Foerster.—p. 170.
Influences Affecting Metabolism Tests. W. Arnoldi.—p. 187.
Residual Nitrogen in Blood in Influenza. E. A. Cohn.—p. 201.
Influence of Thirst on Nitrogen and Chlorin Metabolism. K. Frankenthal.—p. 208.
Bacteria in Duodenal Juice. B. Hoefert.—p. 221.
Pneumopericardium. A. Mayer.—p. 236.
Leukocyte Picture Under Influence of Drugs. H. Wollenberg.—p. 249.
Ferments in Duodenal Juice. K. Isaac-Krieger.—p. 259.
Flapping of Thorax Wall. G. Holler.—p. 269.

The Catalase of the Erythrocytes.—Nissen discusses the diagnostic import in human and experimental blood diseases of the catalase index of the red corpuscles.

Paroxysmal Hemoglobinuria and Isolation of Substance Causing the Wassermann Reaction.—Burmeister states that signs of syphilis were evident in 30 per cent. of the 207 cases of paroxysmal hemoglobinuria he has compiled, and the Wassermann reaction was positive in 95 per cent. of the 76 in which this test was applied, and in 2 of 3 cases personally observed. His experiments demonstrated that the hemoglobinuria from chilling is able to induce a positive response to the Wassermann test in the absence of syphilis. He succeeded in isolating from the blood in these hemoglobinuria cases the amboceptor that induces the positive response in the Wassermann test. When added to normal serum, the Wassermann test then applied elicited a positive response. This "chilling-amboceptor" seems to combine with the lipoids in a warm environment, but it does not combine with the erythrocytes (and thus induce hemoglobinuria) except at a chilling temperature. He states that his research preceded Wassermann's recent announcement that he had separated the "Wassermann aggregate" into a "Wassermann substance" and a lipoid. The two form a reversible combination. [The "Wassermann substance" Wassermann explains, displays all the properties of an amboceptor and is thus an antibody. This discovery of the amboceptor inducing the Wassermann reaction is the first time that an antibody for lipoids has been isolated. Wassermann ascribes the action of mercury to its effect on the lipoid metabolism of the cells, more than to its action on the spirochetes. He has recently announced further what he calls the *bestätigungsreaktion*, or confirmatory reaction, in syphilis, but has not divulged the technic. He says that he has applied for a patent on it. His communications were

published in the *Berliner klinische Wochenschrift* **58**:195 and 331, 1921.]

Carbon Monoxid Poisoning.—Günther found evidence of polyneuritis from illuminating gas poisoning in about 1 per cent. of the 215 cases at the Leipzig medical clinic in the last thirty years. Hemorrhagic polymyositis was noted in three cases, accompanied by elimination of a peculiar pigment in the urine in the one fatal case.

Spirochetes in Stomach Content.—Extremely rare in normal conditions, spirochetes were found constantly and in large numbers in the five cases of gastric cancer examined.

Duration of Diabetes.—Heiberg comments on the deaths from diabetes in Denmark in the last ten years, 820 men and 683 women. Under the age of 30, the course was less than nine months in 25 per cent.; less than fifteen months in 50 per cent., and less than two and a half years in 75 per cent. After the age of 50, the course averaged nine years in men and seven years and three months in women.

Mercuric Chlorid Nephrosis.—Gorke and Töppich describe the findings and course in a young man who swallowed 7 gm. of dissolved mercuric chlorid and survived for forty-five days. He died while lumbar puncture was being done to relieve the high intracranial pressure. The pressure at first was over 600 mm. water and only 4 or 5 c.c. of spinal fluid were drawn. The pressure then dropped slowly to 150 mm. and the patient suddenly died. The cerebellum had been sucked into the foramen magnum by the lowering of the pressure.

High Blood Pressure and the Sugar Content.—Härle was unable to discover any regular connection between the height of the blood pressure and the sugar level in the blood.

Treatment of Paroxysmal Hemoglobinuria.—Burmeister confirms the announcements of others that certain salts by the vein or mouth modify the physical conditions of the blood so that the destructive action of chilling on the erythrocytes is temporarily suspended. Cholesterin seems to act in the same way, in this respect, as hypertonic saline solutions.

Septic Jaundice.—Bingold describes a few cases of sepsis in which jaundice formed part of the clinical picture. The symptoms were about the same whether aerobes or anaerobes were involved. The Fraenkel gas bacillus has an especially intense destructive action on the blood. Pronounced jaundice with hematinemia is a serious condition, but remarkably prompt and complete recuperation is possible when the sepsis is conquered.

Zeitschrift für Urologie, Leipzig

1921, **15**, No. 9

Functional Tests of the Kidneys. Pfaumer et al.—p. 351.
Malformations in Male Genitals with Aplasia of Kidney. Brack.—p. 389.

1921, **15**, No. 10

Roentgen Examination of Bladder from the Side. Sgalitzer and Hryntschak.—p. 399.
Duplication of Ureters. E. Brattström.—p. 407.
*Prognosis of Carcinoma of Penis. W. Peters.—p. 410.
Degenerative Nephrosis Cause of Renal Neuralgia. Heymann.—p. 415.
Sources of Error in Catheterization of Ureters. H. Boeminghaus.—p. 422.
Septum in Bladder. G. Praetorius.—p. 427.

Prognosis of Carcinoma of the Penis.—Peters reports that 14 have been free from recurrence of 25 patients operated on from two to thirteen years ago, including 4 that died from old age, pneumonia or a stomach affection from two to nine years after the operation, including 2 free from metastasis for two years. This brings the cured to 68 per cent; 3 died from postoperative pulmonary embolism or edema or pyelonephritis, and 3 developed fatal metastasis from one to eight years afterward. Küttner has reported cures in 73 per cent. of his 22 cases in which no attempt was made to remove the connected glands, but Peters' experience warns that they should be extirpated likewise. There was metastasis in these glands in 50 per cent. of the 8 cases in which the glands were left.

Zentralblatt für Chirurgie, Leipzig

Oct. 15, 1921, **48**, No. 41

Ethyl Chlorid, a Valuable Narcotic Requiring Caution in Using. A. Ley.—p. 1502.
*Continent Artificial Anus. F. J. Kaiser.—p. 1505.
"Substitute for Sphincter in Artificial Anus." Kurtzahn.—p. 1508.
A Modified Type of Tracheal Cannula. G. Schmidt.—p. 1510.
Laced Flannel Bandage for Laparotomy Dressing. E. Hempel.—p. 1511.

New Factors Toward the Solution of the Problem of a Continent Artificial Anus.—Kaiser gives a preliminary report of his method, which he terms "anus praeternaturalis femoralis." It is a modification of the Madelung method for establishing an artificial anus, and consists in passing the distal end of the sigmoid loop through the left sartorius muscle which grips and releases the artificial opening as the sartorius muscle is contracted or relaxed. The details of the technic are not given here.

Nederlandsch Tijdschrift v. Geneeskunde, Amsterdam

Oct. 15, 1921, **2**, No. 16

*Symptomless Abdominal Cancers. J. W. M. Indemans.—p. 1957.
Mutation of the Colon Bacillus. J. J. van Loghem.—p. 1966.
*Exaggerated Reflex Excitability. J. Pinkhof.—p. 1971.
*Late Recovery from Catatonia. F. J. Haverkate.—p. 1974.
Transient Disturbance in Vision Under Arsenical. Schoute.—p. 1978

Metastasis of Unrecognized Abdominal Cancer.—In the three cases reported by Indemans the primary cancer had given no signs of its presence until it had induced a metastatic tumor at a distance. One woman of 63 had a cancer in the navel, four years after removal of a mammary cystadenoma. She had long worn a pad for a small umbilical hernia. The carcinoma in the navel region developed very slowly, without causing much distress, and in the third year a cancer was found in the rectum. There was no local recurrence of the mammary cancer. He remarks that he knows of no instance on record of a primary umbilical cancer, so that he accepts the navel cancer as a metastasis of the unsuspected rectal cancer. In the second case, the man of 49 complained of pain in and swelling of the glands in the left supraclavicular fossa as the first and for about four months the only symptom of a cancer involving the cardia and adjacent esophagus. In another case a tumor in the pouch of Douglas proved to be a metastasis from a carcinoma in the sigmoid flexure which had never given any signs of its presence before in the woman of 62. He cites from the literature some cases of metastasis in the ovaries in which the primary cancer in the stomach was not discovered until necropsy. In conclusion he remarks that in the 3 personal cases described, the patients seemed to be in perfect health when first seen, notwithstanding that their malignant disease had reached the metastasis stage. In the gastric cancer case, the blood gave a pronounced antitrypsin reaction, which he considers very instructive.

Enhanced Reflex Excitability.—Pinkhof describes research on the physiology of Kohnstamm's after-contraction.

Cure of Catatonia.—Haverkate compares various statistics as to recovery from catatonia after a prolonged course, and relates the details of a case which began at the age of 23. The young man presented a typical case of catatonia for eight years, and then seemed to throw it off completely. After his eight years of institutional existence he regained full earning capacity, and has been promoted in his business during the two years since his recovery.

Ugeskrift for Læger, Copenhagen

Nov. 17, 1921, **83**, No. 46

*Vasectomy in a Dog. K. Sand.—p. 1509.
*Railroad Nystagmus. T. B. Wernøe.—p. 1516.
Diphtheric Heart Lesions. C. Schwensen.—p. 1522.

Vasectomy in a Dog.—Sand experimented on a large hunting dog, apparently sound except for his advanced age, 12½ years. The illustrations show the senile appearance of the dog, which was scarcely able to crawl around, and the rejuvenation that followed bilateral resection of 3 or 4 cm. of the epididymis close to the testicle. Within five months the dog seemed to have thrown off three years from its age, and could run along with the bicycle for a 15 kilometer spin.

Railroad Nystagmus.—Wernøe states that what Bárány calls railroad nystagmus does not occur unless the visual apparatus is in good condition. Hence he has found this reflex useful in estimating the prognosis with amaurosis, etc., of different kinds, and as a means of differentiating the vestibular type of nystagmus.